THE ALABAMA
MEDICAL JOURNAL.

VOL. 18. JULY, 1906. NO. 8

Original Communications.

SUPPURATION OF THE ACCESSORY SINUSES.

By B. D. Sibley, M. D.,
Birmingham, Ala.

Those animals which depend on their sense of smell to aid in obtaining their food have a very highly developed olfactory system. We find the nose and the accessory sinuses comparatively larger The sinuses subdivided and the turbinates more numerous to afford more surface for the distribution of the olfactory nerves. In these animals the branches of the olfactory nerves are distributed throughout the accessory cavities.

But in man, who is endowed with higher faculties and not dependent upon his sense of smell for finding food, this system of labyrinths has degenerated into comparatively simple structures and the turbinates have been reduced from five to two in number.

The accessory sinuses in man no longer contain normally any subdivisions; but rudiments, as well as complete septa, are occasionally found in some of them.

The sinuses themselves are almost completely shut off from the

nose by the contraction of their ostia, their olfactory function is lost, and they now serve as respiratory cavities only.

The principal function of the nose is to warm and moisten the inspired air, the performance of which necessitates special anatomical arrangements. This is provided for by the turbinates and accessory sinuses. In order that the air may be properly moistened and heated the rapid influx must be arrested somewhat in its progress. The entrance into the nose is small, but the nasal cavity itself is large. On the outer wall of the main cavity are found several small openings which communicate with larger cavities; the accessory sinuses, respectively: the antrum of Highmore, ethmoid cells, sphenoidal sinuses and the frontal sinuses.

To further arrest the inspired air, jutting from the outer wall into each nasal cavity we find two shelves or turbinates, freely covered with blood vessels and mucous membrane, which is continuous with that of the accessory sinuses, all arranged so as to impede the air. Posteriorly marking the exit from the nasal cavity is found small opening, hence each nasal cavity is really a reservoir with a small opening at each end for the entrance and exit of air, and might be compared to a lake where the air is constantly flowing pure and free and yet retarded long enough normally to be warmed and moistened during its course through the nose. This arrangement prepares the air for the lower respiratory tract, and any departure from the normal arrangement, such as catarrhal congestion, with swollen mucous membrane, or hypertrophy, traumatism, etc., can cause a blocking of these openings and thus by retention of secretion containing bacteria, act as excellent incubators for purulent inflammatory products, with its resultant effect on the tissues.

There are several ways of classifying the accessory cavities. I shall divide them into an anterior and posterior chain; determined according to whether they drain anteriorly in to the middle meatus and beneath the middle turbinate, or posteriorly into the superior meatus and above the middle turbinate.

All the anterior chain drain beneath the middle turbinate by way

of the hiatus semilunaris and include the antrum of Highmore, an terior ethmoid cells and the frontal sinus.

The posterior chain includes the posterior ethmoid cells and the sphenoidal sinuses.

I shall devote my paper to the discussion of the anterior chain, as they are most often involved, and I think it will be of more interest to the general practitioner and surgeon. In so doing I shall not attempt to describe the various operations, which are claimed to be the ideal ones by their originators and will not confuse you by their discussion, but merely state those methods which I consider the best after considerable research, many operations on the cadaver, the study of over one hundred sections and what experience has taught me with the cases I have had during my practice in this special line of work. This, as I presume any subject that a man may devote his special time to, impresses me as being one of the leading subjects the rhinologist has to deal with today; it is foremost in the minds of our best thinkers and much good is being accomplished. Understand me at the beginning that I do not claim anything original in this paper, but merely wish to state to you the points of interest that impress me as being valuable and which have served me in my work.

The anterior chain we might consider as linked together by the hiatus semilunaris. The hiatus semilunaris is a crescentic groove, which leads from an opening in the floor of the frontal sinus at its lower and inner part, passes downward and backward on the outer wall of the nasal cavity under the cover of the anterior part of the middle turbinate and terminates at the opening of the antrum of Highmore. Situated along the course of this groove and forming the upper and posterior border of the hiatus we find the anterior ethmoid cells. The most prominent cell seen from the anterior naris is known as the bulla ethmoidalis. The lower and anterior edge of the hiatus is known as the uncinate process. This groove or hiatus is a definite and constant landmark to be recognized and located in all sinus operations. In order to locate the groove the anterior end of the middle turbinate must be removed. High up at its beginning the

frontal sinus drains and near this point is where the anterior Ethmoid cells also drain.

An attempt will not be made to describe the nasal cavities in detail, but it is quite necessary to refer to the principal points. I shall refer only to the outer wall of each cavity as it is the only one on which we find our points of interest. Each outer wall is traversed by two shelves or wing-like bodies, known as turbinates, which project into the nasal cavities and divide each nostril into three compartments, or meatuses. The inferior meatus is a space between the floor of the nose and the inferior turbinate. The middle meatus is the space between the two turbinates. The superior meatus is all the space above the middle turbinate. There are two points of interest on the outer wall of the inferior meatus. These are, first, the opening of the lacrima-nasal duct, found one-half inch behind the anterior tip of the inferior turbinate, just beneath the junction of the turbinate with the outer wall. The second point of interest is just back of this lacrima-nasal opening, where the wall is very thin, and is the point where a puncture should be made for diagnostic or drainage purposes.

The points on the outer wall of the middle meatus were very well described while discussing the hiatus semilunaris. I was for a long time puzzled as to just what the infundibulum was. It is nothing more than the upper part of the hiatus semilunaris where it enters the frontal sinus, also called the naso-frontal duct, and is about one-fourth inch long.

It is to be deplored—the confusion of terms which are used by anatomists in describing the nose; all that is necessary to be remembered, however, is that in every instance there is present in the middle meatus a groove extending as described above, and which receives drainage that may come from either the frontal sinus, anterior ethmoid cells, or antrum of Highmore.

You can readily see from the close connection along the groove how easy it is for one sinus to transmit infection to another. They are often simultaneously involved, but are also involved separately. In the superior meatus we find the openings of the posterior ethmoid cells

with grooves somewhat similar to the hiatus which convey secretion posteriorly. Here is also found the opening to the sphenoidal sinus.

The accessory sinuses have points of special interest which will be referred to in discussing the operative procedure on each. My paper, so far, may appear to you as a rehearsal of the anatomy of the nose, but, as I stated at the beginning, a thorough knowledge of the surgical anatomy is absolutely necessary in order to treat intelligently disease in the accessory sinuses, as in every case of sinus infection there is great liability for surgical demands.

Etiology. Any of the acute infectious diseases consequent on coryza, such as measles, influenza, or repeated acute colds; traumatism by conveying pyrogenic matter to the sinus or obstruction to the exit of secretions by hypertrophy, polyps, or malignant growths. Adenoids may give rise to purulent inflammation of the accessory cavities.

Afer the cavity is infected the mucous membrane undergoes the changes that mucous membranes are subject to in closed cavities; first swollen and congested, hyper secretion, then hypertrophy and polyps are liable to form. The retained secretions laden with bacteria keeps the cavity renewed with inflammatory products, and when the cavity becomes closed you often have an offensive caseous formation, and sometimes the cavity swells and may rupture in any direction, thus infecting either the cranial cavity, orbit, or may rupture into the nose. Hence you can see the necessity of early recognizing the condition and as soon as possible relieving the retained pus. Not all cases, however, are occluded and we may have the sinus, as it were, filled and overflowing.

The symptoms are frequently associated with acute coryza. The patient often complains that he has catarrh and takes cold frequently, having to clear rhino-pharynx and soils many handkerchiefs during the day. He has headaches, neuralgia, pain over region of the cavity and tenderness on pressure, or may have swelling over the cavity. Examination of the nose will show the mucous membrane red and injected. The anterior end of the middle turbinate is usually swollen or polypoid; pus is seen beneath the middle turbinate, or you may find polyps from one to many and varying in size, hanging from the mid-

dle turbinate, or beneath the turbinate along the hiatus. Sometimes the posterior end of the inferior turbinate is very much hypertrophied, blocking the choana on the affected side, due to constant irritation from pus trickling backward over the turbinate. Often the sense of smell is impaired and the patient has a very offensive ozena.

The treatment of these conditions depends upon whether seen in the acute or chronic stage, and which one or how many sinuses are involved. If seen in the acute stage often merely shrinking the swollen mucous membrane, which surrounds the openings in the hiatus semilunaris, frequently with cocaine and adrenalin so that the sinus can empty itself and keeping the nose clean is all that is necessary. I always apply the cocaine and adrenalin myself on a cotton swab. Cocaine four per cent. solution is applied to the region of the middle turbinate and then a flat spatula pointed probe is used to elevate the middle turbinate and at the same time scrape such granulations from beneath the turbinate as have formed there. Then pass a small saturated swab beneath the turbinate as far as you can, so as to shrink the tissues there. Then clean the nose, keep the patient in bed, give a hot foot bath, Dover's powders and calomel at night, and look after his general condition.

If seen in the chronic stage, first try to establish free nasal respiration by removing any obstruction, such as hypertrophy, spurs or polyps, and then try to locate the source of pus. After cleansing the nose remove the anterior end of the middle turbinate and swab the hiatus, leaving a small plug of cotton in its upper part. Make the patient bend forward, his abdomen on a stool and the top of his head resting on the floor, with his face tilted to the opposite side for a few minutes, then make him blow forcibly through he suspected nostril and often pus will be found oozing from the lower end of the hiatus, especially if the pus is liquid. Then I suspect the antrum, as its normal opening is found there. This method may fail if the pus is thick or polyps are present in the antrum. Again if the lower end of the hiatus is plugged and pus continues from above, we infer that it is either from the frontal sinus or anterior ethmoid cells.

I use transillumination in every case of suspected disease of either

the antrum or frontal sinus. It has never proven of much service in frontal sinus cases, but it has been the means of making a positive diagnosis in several antrum cases for me, in which the picture was very clearly defined. Pain elicited on pressure over the antrum or frontal sinus of course is a great aid, but if still in doubt as to the source of infection I proceed to pass a Myles trocar up beneath and one inch behind the anterior end of the inferior turbinate and puncture the antrum. If pus be present it will be found oozing from the external end of the trocar when the canula is removed, this makes the diagnosis positive, so far as the antrum is concerned. When I find pus in the antrum I irrigate the cavity through the canula with normal salt or same proportion of bi-carbonate of soda solution, or one to fifteen thousand bi-chloride solution. The solution makes its exit through the normal openings above the inferior turbinate. If after a reasonable time with irrigations the patient does not seem to improve I insist upon doing a radical operation.

Unless the antrum is infected from a diseased tooth, I would never advise opening through the alveolar process, which is so often done by dentists; and if the transillumination shows a marked difference in the shade of light I should not advise that route, but proceed as above, for it has been conclusively proven that pus itself does not interfere with the transillumination, but that the shadow is produced by the thickened and polypoid mucous membrane and treatment by irrigation is too slow as well as uncertain, for no one can tell the positive change which has taken place in the mucous membrane of the antrum until he has explored the cavity and investigated its contents. Another objection to the alveolar route is in the fact that the thickness of the alveolar process varies greatly.

The antrum develops or buds out from the region of the normal opening which is situated at the upper and posterior angle of the inner or nasal wall and spreads from this point downward, outward and forward and when there is lack of development it is usually in the downward direction. This explains why the floor of the antrum is sometimes found to be very thick. There is little or no development upward, on account of the orbit and so the normal opening is situat-

ed near the roof. Another very important point, which was demonstrated to me by Mr. Beman Douglass, while studying many sections, is the fact that while the antrum may fail to develop downward, in every instance it reaches outward beyond the malar ridge. And hence he makes his entrance one-eighth of an inch internal to the malar ridge, not through the canine fossa, but above it on the anterior surface of the malar process of the superior maxiliary bone. The wall is thin here and the antrum is entered with ease.

General anasthesia is used. Place the patient on his back with head lowered. This avoids the necessity of plugging the posterior nares, as is usually done to keep the blood out of the larnyx, which procedure, as well as plugging between the teeth, interferes with the anaesthetist, who at best has a very hard time during operations on the mouth and nose. The teeth are carefully cleaned, the lips retracted by an assistant and an incision is made along the gingivo-labiel line, through the mucous membrane muscles and periosteum, extending from the incisor to the first molar tooth. The periosteum is retracted and the anterior surface of the malar process is brought clearly into view. The sinus is opened at Douglass' point one-eighth of an inch internal to the malar ridge and enlarged downward to the level of the floor over the alveolar process and internal to the nasal wall and upward to within one-eighth of an inch of the infra orbital nerve. This opening affords a good view of the cavity. The contents of the cavity are carefully removed by a curette, paying particular attention to the angles of the antrum, especially the region of the inner walls near the normal opening. Then a counter opening is made into the nose. Beman Douglass enlarges the normal opening above the inferior turbinate, but I prefer the Caldwell-Luc method, which is as follows: After having previously removed the anterior end of lower turbinate make the counter opening beneath the inferior turbinate as there is less danger of puncturing the orbit and you have the advantage of a lower point for drainage. Make this opening large enough to trasmit a finger and then smooth all spiculae of bond down to the level of the floor of the nose. Again clean the antral cavity, dust with iodoform and pack the antrum in such a way with

a single strip of gauze that the last end may be passed through the counter opening and extend out of the nose. Should you use more than one strip of gauze, remember how many are used, so that all will be removed when redressing the wound. The original opening in the mouth is closed with catgut sutures. Leave the gauze in the antrum for four or five days. After this the cavity is treated through the counter opening in the nose by irrigation.

Should the antrum not be involved and pus is still seen in the hiatus, I feel the condition of the anterior ethmoid cell by use of a probe. If the bulla ethmoidalis is found to be large and yields easily to pressure, I open the cell; however, very often after I have once removed the polypoid end of the middle turbinate I find that the bulla simply sloughs away, leaving other cells exposed. After clearing the field, you can take a probe and find which cells are infected and if necessary open them up.

When the frontal sinus is involved I have, on several occasions, had the swelling reduced at once by the mere removal of the anterior end of the middle turbinate and opening up the anterior ethmoid cells, thus allowing free drainage from above. This good fortune is not to be had, however, and you have to open the sinus externally.

The frontal sinuses are two pyramidal shaped cavities, placed between the two plates of the frontal bone, with their bases together, the partition separating them is normally situated in the median line of the forehead. This condition may vary much and one or both sinuses may be absent. When they vary in size, but always extend partly over the nasal cavity and partly over the orbit, from the septum outward. In the floor of the portion which is situated over the nose we find the commencement of the hiatus semilunaris.

The frontal sinus develops by a budding upward and outward of the upper end of the hiatus semilunaris, as the child's face develops. This usually begins about the age of five and is completed at puberty. When the frontal sinus is absent it is accounted for by the fact that the upper end of the hiatus failed to spread. This is an important point to be remembered, for when an effort is made to open the frontal sinus at the usual point and you have gone a reasonable distance and have

not entered the sinus, it is then advisable to go to the point directly over the naso-frontal duct, which is located, according to Douglass. as follows: Draw a line between the two supra orbital notches, then drop a second line perpendicular to the first line through the median line of the nose. Draw a third line parallel to the second line, midway between the inner canthus and the second line. The point where the third line intersects the first line lies directly over the naso-frontal duct. If the opening is made here the sinus if present will certainly be entered, no matter how small; if not present, the chisel will enter one of the anterior ethmoid cells and no special harm will be done.

The method that I pursue in treating frontal sinus is as follows: First of all I prepare the way for drainage through the normal route in the nose; which is done, as stated above, by removing the anterior end of the middle turbinate and opening up the ethmoid cells, all of which can be seen from the anterior naris. I then take a soft flexible silver probe bent at the proper angle and place one end in the hiatus semilunaris and follow the groove upward and forward, keeping the end pressed against the outer wall in the hiatus. When the highest end of the hiatus is reached, if you can enter the frontal sinus you will notice that it does so by turning outward over the orbit. This success cannot be gained in every case, but often can, and after I have entered the sinus I withdraw the probe and take a frontal sinus catheter, adjust the curve similar to the probe that had been inserted, pass it into the sinus by way of the hiatus and irrigate with normal salt, or one to fifteen thousand bi-chloride solution. This preliminary method has proven most satisfactory in frontal sinus cases. If this does not relieve the patient, I proceed to open the sinus externally through the anterior wall at or near the point described above, and take a probe to find out the dimensions of the cavity, how far out over the orbit, and how far upawrd it extends, then enlarge the opening as far outward as is necessary to enable me to curette and remove every vestige of mucous membrane. The size and shape of the superciliary ridges often will allow considerable amount of the anterior wall to be removed without resulting deformity. (Notice if there should be a septum, as was present in a case that I saw with Dr.

Myles while in New York. He was operating on a man who had been previously operated upon and after cleansing the sinus and about to close the wound he noticed a small bead of granulation on what he supposed to be the outer wall of the cavity, which a probe convinced him was another pocket. This extended to the outer angle of the orbit. The septum was removed and a mass of granulations with the entire mucous membrane was curetted and the cavity packed with gauze. The man made a speedy recovery.) The opening into the nasal cavity should be enlarged, taking care not to injure the cribriform plate, which lies internal. Keep the cutting edge of the curette outward, so as not to injure this structure. I prefer not to leave any drainage tube or gauze from the sinus into the nose, for if the opening is large enough, and the preliminary steps are taken to remove obstruction along the hiatus semilunaris you will have no trouble. The sinus is dusted with iodoform and packed with iodoform gauze. The outer end of the wound is stitched and the sinus allowed to become obliterated by filling up with scar tissue.

During the period of convalescence he is not allowed to blow his nose, lest he fill the wound cavity with secretion from the nose, or possibly cause an emphysema.

In two of my cases the frontal sinus had ruptured externally. The skin over the forehead was swollen and pus had escaped beneath the periosteum, and one case which had been discharging through a fistula responded rapidly by removing the hypertrophied end of the middle turbinate and opening up the anterior ethmoid cells, thus avoiding the external operation.

I do not state that every case of frontal sinus will be cured by merely removing these structures, but think it is necessary to first remove any obstruction to the normal course of drainage along the hiatus semilunaris. And even when the external operation is decided upon, the above method should be resorted to as a preliminary course.

In conclusion, I think conservative methods should always be given a trial before recourse is had to radical ones.

It is not necessary to remove all of the anterior wall of the frontal sinus, but yet sufficient must be removed to make certain that no

incomplete septa hide any diseased mucous membrane so that the cavity may fill up with connective tissue and be obliterated.

Drainage of the antrum is secured most satisfactorily through the nose.

The establishment of free nasal respiration is an important factor in securing permanent results.

IMPRESSIONS OF THE MAYOS AND THEIR WORK.

By R. C. Bankston, M. D.,
Birmingham, Ala.

Watching the incoming trains of Rochester, Minnesota, and witnessing the outpouring of people coming hopefully to that beautiful little mecca of the Northwest, a majority of whom are afflicted with some malady requiring the surgeon's skill for relief, and nearly all the others being doctors who represent the best surgical sentiment of their various communities—one would be impressed with the value the general public is placing upon the surgery of those gifted brothers, W. J. and C. H. Mayo, who easily take rank as peers of any surgeons of modern times. I do not wish my remarks to be construed as those of an enthusiast; but the Mayo's uniform success in operative cases (some of which even very recently, from position in the body and nature of their progress and character were deemed necessarily fatal in termination) calls for recognition by conservative surgeons who advocate high ideals and relative perfection as the true scientific surgical standard of the present.

The Mayo's, with thorough knowledge of the pathology involved, and relations of the various tissues and organs coming within the operative sphere go ahead with vigor and certainty, knowing that success will crown the effort in nearly 99 per cent. of all cases operated. During my stay I saw no deaths attributed to operation, and I saw the majority of operations for 5 weeks. I tabulated those occurring between April 26 and May 12, a period of 15 operative days, or two and one half weeks.

That one may gain an idea of the field and scope which those oper

ations cover I will state that 232 operations were performed in that time. (List omitted.) There was, on an average, an attendance daily of about 35 visiting doctors: any morning you could enter the clinic rooms and miss faces you had seen for past several days; and see instead new faces, which in turn would disappear in about two weeks, that being the average length of time a doctor stayed.

I saw there some men of note who came—not from idle curiosity—but to witness a technique and initiative superior to their own: Scudder, of Boston; Ochsner and Murphy, of Chicago; Biggar, of Cleveland (who is Rockefeller's physician), Rodman, of Philadelphia, Prof. of Surgery in the Medical College; Napier McLean, of Auckland, New Zealand; Dr. Sir A. G. McKenzie, of Calgarry, Alberta Province, Canada; Koman, of Wheeling; the Trendelenburgs, of Leipzig, Prussia, father and son.

I watched those men with keen interest, and know that all, even the elder Trendelenburg, took voluminous notes on the operations, especially technique and initiative—or rather the improvement in method over any procedure before known to them.

A glance over the old register will show the names of surgeons from all over the world. I would seriously urge any of our surgical talent, contemplating a trip abroad in search of improvement, to finish off the course in your own country at the Mayo's Clinic. It will put you strictly up-to-date on the most progressive principles of surgical precept practiced or proposed anywhere.

MIGRAINE.*

By Clarance King, M. D.,
Machias, N. Y.

The term migraine properly refers to a severe pain limited to one lateral half of the head and generally accompanied by nausea or

---

*President's Address before the Medical Society of the county of Cattaraugus at Salamanca, N. Y., May 1, 1906. Reprinted from Buffalo Medical Journal.

vomiting, and by other functional and indefinite symptoms of a character nearly constant to the individual. But while such cases are quite frequent and cause much suffering and inconvenience from their severity and usually obstinate and recurring nature, still there are many milder and less typical cases in which the character of the pain and the disease as a whole is much different. By common consent the term is now applied to any pain of the head which is attended by nausea or vague paresthesias or other symptoms and which is not due to rheumatism of the scalp, to supra-orbital or other neuralgia or to obvious organic lesion.

The causes of migraine are not well understood. Probably the one of first importance is heredity and Gray asserts that this is more often operative through the maternal than through the paternal ancestry. On the other hand the influence of heredity is stoutly denied by many competent observers. Some authors have contended that there is a close relation between this disease and petit mal or other forms of nervous irritability and cite its frequent occurrence in families thus affected. Toxemia, either through the manufacture and absorption of new substances in the alimentary canal or through failure of excretion of some of the poisonous end-products of destructive metabolism, is undoubtedly a potent cause in many instances. Thus, following a debauch or the ingestion of indigestible substances, we often find a headache which though similar in character to that of migraine is relieved by a brisk cathartic or free emesis. But again, stomach digestion seems to be but little interferred with in this disease which lends favor to the opinion that the fault is with the liver or other organs of digestion. Sedentary habits, the failure of proper ventilation, neurasthenia, the menstrual epoch and overindulgence in the pleasures of the table or in venery are not without influence in those predisposed. But while these causes, as likewise anemia, insomnia, arteriosclerosis and eye strain, are undoubted factors in causing ordinary headache it is very doubtful if they alone are ever able to induce true migraine.

Sick headache occurs more often in women than in men, possibly in part due to their more sedentary employment which tends to make

excretions less active and affording greater opportunity for toxic absorption. It is a disease, essentially, of early adult life, rarely beginning before puberty or continuing to very advanced age. When once initiated attacks of more or less severity are apt to recur for a long period of years either with regularity or upon exposure to some definite cause; but after middle life they tend to diminish in severity and in frequency, if not totally to cease. This, however, does not invariably happen and numerous exceptions to this rule occur.

A typical attack of migraine is often preceded by premonitory symptoms, of long or short duration, which are pathonomonic to each case, the sufferer himself from past experience or his friends being able to predict an attack some time in advance. These symptoms consist of dimness of vision, of paresthesias of the skin, generally of one or both extremities or of the face, of slight nausea and loss of appetite, of chilliness, and of general feeling of malaise or lassitude. The premonitory stage is followed by an uneasiness in one side of the head, usually over the eyebrows or in the temples, which soon merges into actual pain, sometimes very intense in character. With this pain there may be intolerance to light and sound and the patient lies quietly with the eyes closed or he may be drowsy and sleeps. In other cases the pain may be slight and the premonitory symptoms wanting or at least transient and not well marked; but in all cases there is more or less nausea at some time during the attack. Frequently the emptying of the stomach by emesis gives partial relief for a time, especially if the attack is induced by overindulgence, or it may terminate it if it has lasted for some hours. But again this has no appreciable effect on the sickness, the only relief coming from opiates or analgesiacs or from the attack gradually wearing itself out.

The severity of an attack of migraine varies between wide limits and is not always proportional to the actual amount of pain present. Thus, a person with little pain may vomit more, suffer more from paresthesias of various parts, from photophobia and dimness of vision and be as much incapacitated from business as one who has more pain. Again, the cases in which pain is not intense but in which the other symptoms are severe show as much tendency to recurrence at

regular or irregular intervals as the very painful ones, at least during the time of greatest activity of the disease. As regards danger to life it may be said that migraine is never followed by fatal results; nor does it often, if ever, induce other diseases. But that it tends to recur with more or less regularity for a long time and to cause absolute suspension of the usual business activity of the sufferer is a matter of common observation with us all.

As an interesting, although quite typical, example I would cite the case of a former medical friend in Buffalo in whose home I was an inmate during two winters while taking my college course in medicine. This gentleman had been a sufferer from migraine for years, having inherited it from his maternal ancestors. Once a month, with almost the regularity of a woman's menses, he had an attack which lasted three days, the two last days being very severe. On the first day he was able to be about and attend to business, making outside calls to those he ought to see during his attack and telling them he could not visit them again until it was past. The second and third days he remained in bed, no one but his immediate family seeing him until the evening of the third day when he would come down to lunch, scarcely able to drag himself to the dining room and looking as though he had passed through a prolonged and severe sickness. The following day he would be in his usual health again. Up to that time he had been unable to find anything that helped him in the least but some years afterward he told me antipyrin relieved him somewhat, but that he had become frightened and would not use it on account of the toxic effects he had experienced at one time after taking it.

The treatment of migraine is, on the whole, very unsatisfactory, as more or less severe attacks are apt to recur in spite of any treatment yet devised and only cease with the advent of advanced age or possibly in exceptional cases with a radical change in the personal habits and mode of living. However, the individual attacks may be cut short or made less severe by the use of opiates or some of the coal tar derivatives. We are all familiar with the migraine tablet containing acetanilid, monobromated camphor and citrate of caffeine which in mild cases will frequently bring relief but antipyrin will often succeed

where this fails. In sevère cases morphia or opium in some form is undoubtedly the safest, if not the only, drug of real use, but it should only be given at intervals and after careful consideration on account of the great danger of inducing the drug habit. Bromide of potassium or soda and chloral hydrate have been employed by some physicians to relieve the attack but I have never seen much benefit follow their use in this disease, while from their irritating effects upon the gastric mucous membrane they are apt to increase the distress at the stom ach if not add to the vomiting. This objection, however, may be obviated by using them per rectum.

The treatment of the disease between the attacks offers some chance of lessening their frequency and severity to a moderate degree and for this purpose a large number of drugs have been tried, which goes to show that none of them is entirely satisfactory. The one that has given me the best results is cannabis indica; this I give in doses of one-quarter to one-half grain three or four times a day, generally in tablet form on account of its greater convenience to the patient as it needs to be continued for months or even years. Patients who will persist in this treatment seldom fail to receive benefit even in the worse cases, as the attacks gradually become less and the intervals longer; but a return to their former severity follows its discontin uance. I have a patient who has taken the drug for nearly three years with only short intermissions, these being followed by a sevère attack of migraine, which caused her to again begin its use. She now asserts her intention of continuing it until advanced age relieves her of its necessity.

In some cases the sodium salts, particularly the benzoate, the salicylate or the sulphate, give relief but in their use I have had little or no experience. The bromides cannot, or at least, should not, be used continuously for the purpose of warding off an attack as the resulting mental impairment is worse for the patient than the occasional attack of migraine. In all cases an attempt should be made to ascertain the cause of the disease and if it is possible to find any accompanying disorder it should receive attention. Thus, we often note these patients are anemic and tire easily, possibly have a blowing murmur at

the base of the heart, which is easily excited to increased activity. In such cases a course of iron or arsenic with some bitter tonic like calisaya or quinine, is a good adjunct to other treatment and should not be omitted. Other cases showing lithemia or the gouty diathesis, as indicated by evidences of imperfect oxidation, by catarrhal disturbances of the gastrointestinal tract, by deficient biliary secretion with foul breath and coated tongue, by arteriosclerosis or by chronic diseases of the skin, call for appropriate remedies directed to the accompanying condition whether we accept that as causative or not.

These cases occur most frequently in hearty eaters, especially if leading a sedentary or in-door life and show an excess of uric acid or urates in the urine or a deposit of oxylates or lithic acid crystals upon cooling. A brisk chologogue cathartic followed by a prolonged course of treatment by alkalies with restricted diet and abundance of outdoor exercise, will usually improve the general condition and frequently ameliorate the migraine.

Again, if we find astygmatism or disease in the aureal or nasal cavities or in the throat, or if pelvic or cardiac disease is found by careful inquiry or examination, this should be attended to by competent specialists, if necessary, as we can scarcely hope to improve the migraine so long as there is reflex irritation from these parts.

Of late years physical therapy has come largely into favor in the treatment of disturbed metabolism and lowered enervation and migraine offers a promising field for its use. The high potential electric current is a powerful tonic to the whole system and the static breeze and insulation are great equalizers of function. In migraine, as in other forms of chronic disease, they will accomplish much if their use is persevered in for a sufficient length of time. Snow has great faith in the wave current and directs it to be applied to any part most agreeable to the patient but prefers the spine. Often during an attack, if very severe, the galvanic current will be found of use, the polarity being to the head; a mild current only can be used, the polarity being determined by the conditions present. Generally the positive pole is indicated on account of the congested state of the brain but the opposite may be called for in some instances.

Again, hydrotherapy, as by the dripping-sheet bath, may be of use in stimulating the nerve centers and arousing normal functionating of the organs. Or, if a history of toxemia can be elicited, the superheated air or steam bath may be employed with good prospects of beneficial results, especially if it can be shown there is deficient excretion or sluggish portal activity; and finally, if constipation is present massage, vibration or electricity in some form, or other physical agent may be of use in causing normal evacuations and bringing about amelioration of the migraine.

I desire now to describe to you the disease as it affects the author of this paper, as it presents some symptoms I have never met elsewhere or seen described in literature. I make no claim to their being unique or unheard of before but they must be at least infrequent and may be somewhat interesting to you.

My maternal grandmother was a sufferer from migraine for many years up to within ten or twelve years of her death at the age of seventy. Within my recollection her attacks were infrequent but lasted several days and were attended with a great deal of dizziness and nausea which confined her to bed. My mother died at age of thirty when I was only a year and a half old but I have heard my father speak of her as suffering from migraine. My migraine came on when I was a boy in school, probably about ten or twelve, and I had frequent attacks until about twenty-five years ago since which time I have been gradually getting better of them. For a number of years past I have seldom had an attack and when I have, it has not been severe and has lasted only an hour or two. But it is the attack itself, as it affected me at its worst, I wish particularly to describe.

Ordinarily, my family can tell about half an hour in advance that I am going to have an attack of migraine by the appearance of my eyes, but otherwise I have no premonitory symptoms. The attack is ushered in suddenly by two symptoms, either one of which may precede the other by a few minutes. These symptoms are a peculiar disturbance of sight and a paresthesia of the skin, generally of one or both hands and often extending up the arm half way to the elbow. This paresthesia consists of fine prickling sensations which are pop-

ularly known as the part being asleep, last only a short time, perhaps two to ten minutes and pass away suddenly. They may, however, recur. Years ago I experienced these sensations in the face when they affected the upper lip principally but sometimes also the tongue. When thus located I always found they betokened a severe attack. When the tongue was the site of these sensations it felt thick and swollen and speech was interfered with, the articulation of words being indistinct or impossible; in other words, a temporary motor aphasia was present.

With this paresthesia of the skin there is a disturbance of the eyesight which is peculiar in that the range of vision is limited to a very small area. Thus, if I happen to be looking at a person at the time, I can see his face distinctly but his body and limbs and surrounding objects are entirely gone until I move my eyes to direct them squarely upon these parts. This gives rise to queer preception of objects, as you can readily see, for the head appears as if floating in the air and talking unconcernedly without a body. If I move my eyes downward the body suddenly jumps into view while the head vanishes; in either case there are no limbs.

But this eccentricity of sight is still more characteristic if I happen to be reading at the time. In that case I can see distinctly the one word my eyes rest upon, but above, below and at each side is blank paper to the extent of about four inches when that too is lost. As I move my eyes along the line another word suddenly comes into view while the former one just as suddenly vanishes from sight and it makes no difference how long or how short that word may be. A hyphen between two words gives me a clear perception of them both, while without it I can see but one. The dot over the letter "i" shows in its proper place but if there occurs a little longer break, as between the words or between the lines, my vision can not span it to get even a shadowy idea of what is beyond. This disturbance of vision, as you can see, is not hemianopsia in which one-half the field of vision is lost, nor micropsia in which objects appear smaller than they really are. I have been unable to find a term that expresses the condition and will not attempt to coin one.

With these symptoms I generally have some nausea and occasionally vomit, have chilly sensations and wish to get near a fire, although that may make my general sickness worse. But with all this I never have much, if any, headache; in fact, I have had many attacks with absolutely no pain. I always feel hungry and as soon as nausea subsides can eat a hearty meal. As for treatment I generally take a migraine tablet and a laxative when my distress is great enough to call for anything and drink a cup of hot tea. When my attacks were severe and before we had acetanilid they always lasted me the balance of the day without regard to the time of the day when they came on. If I slept two or three hours during the day I felt just as badly upon awaking as I did before going to sleep; nothing would relieve me but a full night's sleep and that invariably would. In closing, let me say that I do not consider my gradual improvement during the last score of years with nearly entire freedom for the last eight or ten to be due to old age, but rather to the active life I have led during those years, a great part of which has been out of doors, made necessary by the practice of my profession.

SCIATICA.

By John Little Morris, M. D.,
Columbus, Indiana.

In all probability one of the most troublesome diseases to relieve and cure is the condition usually designated as sciatica, and whether it confronts the family physician or the specialist this class of cases is as a rule unsatisfactory and the physician is very liable to get discouraged, and certainly the patient.

The term sciatica is misleading in the sense in which it is originally used, and does not describe the essential condition which confronts us. In a tabulated list of two hundred cases of pain in the sciatic nerve and its branches, eighty per cent. are proven to be sciatic neuritis, and the remaining twenty per cent. can be considered under two heads, sciatic neuralgia and sciatic rheumatism. The term neuralgia, according to Foster's dictionary, is "a nervous

disorder characterized solely by pain." Neuritis is designated as "an inflammation of a nerve or its sheath, and its branches." The symptoms that make up the diagnosis of neuritis are tenderness on deep pressure over the nerve, disturbance in the function of the muscles supplied by the nerve, atrophy of muscles, and disturbance of electrical response. Sciatic rheumatism may occur after a case of general rheumatism, or in one who is predisposed to rheumatism. However, I do not believe that it is possible for rheumatism to be confined to the nerve alone, hence when we find a case of so-called sciatic rheumatism, it will be found to be more or less in character, including the muscles of the thigh and back. In fact these cases may at the very first have been a sciatic neuritis, and owing to the disturbance of the nutrition of the muscles, especially in patients who have had a previous attack of rheumatism, the rheumatism begins in the muscles, and it would be more proper to call the condition sciatic neuritis, and the muscular symptoms constituting simply an attendant muscular rheumatism.

In order to make a careful study of pain in the sciatic nerve it might be well to review the anatomy of the nerve and its branches. The great sciatic nerve starts in the sacral plexus of nerves, which is formed by the lumbro-sacral cord, the anterior divisions of the three upper sacral nerves and part of the fourth. They all unite into a single, broad, flat cord, triangular in shape, its base being toward the sacrum, and its apex at the lower part of the great sacro-sciatic foramen. It rests on the anterior surface of the pyryformis muscle, and it is covered in front by the pelvic fascia which separates it from the sciatic and pudic branches of the internal iliac artery. The branches of the sacral plexus are six in number—muscular, inferior gluteal, superior gluteal, pudic, small sciatic and great sciatic. The muscular branch supplying the pyryformis muscle arises from the first sacral nerve before it enters the sacral plexus. This anatomical fact will be noted further on in this paper.

The great sciatic nerve supplies the muscles of the back of the thigh, the leg and the foot. It is three-quarters of an inch wide and passes out of the pelvis through the great sciatic foramen, beneath

the lower border of the pyryformis muscle, descends about midway between the trochanter major and the tuberosity of the ischium on the back of the thigh to about its lower third, when it divides and becomes the external and internal popliteals and supplies the parts around the knee joint, and the internal popliteal becomes the tibial, and supplies the foot and heel.

Sciatica is more common in men than in women. Some authorities claim as much as four out of five cases, and others, sixty-five per cent. My own practice has shown five women to twenty-one men. The prevalent age is between thirty and sixty, seldom after sixty, and never before puberty. The liability of the condition depends on climatic conditions, occupation, mode of living, and liability to injury. The purely neuralgic form of sciatica is oftentimes closely associated with pregnancy, lactation and diabetes.

The cure of sciatica has long been a source of trouble to the therapeutist. Many methods have been in vogue and had their day, and it has seemed what will cure one case will fail in the very next one we meet. Surgical intervention has been used in the form of neurectasy, or nerve stretching, which is accomplished by dissecting down upon the trunk of the sciatic nerve, just below the pyryformis muscle, and stretching the nerve by manual force, exerted on a plane with the course of the nerve longitudinally, sufficint to raise the foot from the table, by a pull on the nerve upwards and towards the patient's head. I have seen this operation done several times, and the few cases I have been able to follow demonstrated that the results were unsatisfactory. The esteopathic treatment is also a nerve stretching procedure, being accomplished in various ways by manual force. This treatment fails for the same reason that neurectasy fails; these cases need something more than nerve stretching. Deep injections into the substance of the nerve have been tried, using chloroform, iodine, ether and other drugs, but this method has long since been discarded as unscientific and of no avail as a curative measure. Actual cautery has also had its adherents, principally because an occasional case has responded to this measure. There is only one class of cases wherein this procedure would be indicated, and that is in these hysteroid cases which have the

pain never twice in the same location and even in both hips, and with whom every expedient has been tried; then, and then alone, would it be expedient to resort to this extreme measure, and only then for the psychic effect. Heroic doses of castor oil have been recommended by Moyer, and although this has succeeded in some cases, it certainly will not do as a routine treatment. Hot baths, cold baths and applications have been lauded and used very extensively, and either may act as a sedative, but it is doubtful whether any cures have resulted from these measures. Electricity has many enthusiasts, and they advise all the different forms and technic of applying this modality, continuous, interrupted, sinsuoidal, static wave, violet ray, high frequency, leukodescent ray, and even the X-ray have been recommended for the cure of sciatica. Before the days of mechanical vibratory stimulation, I relied almost entirely upon the static wave, which did not meet the requirements. Patients frequently had to be removed from the chair, as they insisted that it made the pain greater, and in those which were benefited under this treatment—and they were generally the cases with general nervous symptoms—the length of time necessary, and the small gain noticeable from day to day, both by patient and physician, was enough to discourage the general use of this modality. It is difficult to keep a victim of sciatica with a smile on his face and a look of gratitude for the physician unless we are doing something for him that he can see as well as the physicians. Many failures in curing sciatica have been due to the physician wasting his efforts try ing to stop the pain by the use of analgesics, antirheumatics, etc., and paying no attention to the anatomical changes that may have occurred and are the direct cause of the pain.

Examination. To make a careful examination in a case of pain in the sciatic nerve and its branches, we should have sufficient of the clothes removed so that we can see at a glance the entire lower extremities and the back up as high as the cervical region; in other words, it is impossible to make a thorough or an intelligent examination in a case of suspected sciatica by the subjective symptoms alone—we must also rely upon the objective symptoms to a large extent. The physician who makes a diagnosis in a case of pain in the region of the

hip on the mere subjective symptom of pain is not getting at the seat of the trouble, and if he treats the patient on this basis, he is going it blindly and in a manner that will not redound to his credit nor to the welfare of the patient. The proper way to make an examination, to find out the cause of pain in this region, is after the patient is stripped so that we can see his lower extremities and back at a glance, have him lie prone upon his belly on a level operating table with his limbs straightened out as much as is possible, and oftentimes a simple inspection will give in this position some idea to the examiner of the causative factor in question. Oftentimes a bulging of the belly of the pyryformis muscle will be noticed on the affected side, and pressure on this muscle downward will at once produce pain in the sciatic nerve and its branches, because of impinging the trunk of the sciatic nerve against the edge of the great sciatic notch. You will also be impressed with the feeling of tightness in this palpation which will be absent on the opposite side. In a list of two hundred cases treated in the New York clinic, of pain in the sciatic nerve, it was possible in over ninety per cent. to demonstrate an appreciably contracted pyryformis muscle. It will be recalled in the earlier part of this paper that I referred to the fact that the nerve supply of the pyryformis muscle was from the first sacral nerve and above the original of the sciatic nerve. This anatomical fact can account for those cases where the pyryformis muscle is found contracted, and yet no injury of the muscle or other cause of interference in the nourishment of the muscle; yet the contracture of the muscle is sufficient to cause pressure on the sciatic nerve, therefore any irritation at the juncture of the last lumbar with the first sacral vertebra must necessarily cause some disturbance of the pyryformis muscle, because of interference with its nutrient nerve. Remembering how the pyryformis muscle, as it spreads over the great sciatic foramen and comes into close contact with the great sciatic nerve at its exit from the great foramen, and it is easy to see how any change in the shape of the pyryformis muscle, on account of interference with its nutrient nerve, may and will cause pressure on the sciaic nerve with all its attendant symptoms. Pressure contracted here will not alone interfere with the

main body of the nerve, but will also interrupt the circulation in the perineurium and the arteria comes nervi ischiadium, the artery that enters the sciatic nerve itself and furnishes the blood supply for the substance of the nerve.

A careful examination of nearly every case of sciatica will demonstrate a condition known as sciatic scoliosis, literally a lateral deviation of the spine, and if that condition is discovered no importance is usually attached to it, as it is usually supposed to be due to the efforts of the patient to hold himself in as comfortable a positior as possible and carry himself there. This is not, however, the entire cause of scoliesis. The intense pain in the nerve, when the pain begins in the nerve, and a great amount of consequent irritation will cause the muscles in the lumbar region to contract and tilt the pelvis up on side or the other to a greater or less degree, and the tilting of the pelvis increases the irritation of the muscles, and this further increases the contraction of the muscles, and then you might say that we have a vicarious cycle, and there is no beginning and no ending.

There is another class in which the first lesion is muscular contraction, with production of a tilted pelvis, thus causing irritation to the sciatic nerve. These cases usually begin as a lumbago, and the sciatic inflammation does not begin until later. Causative factors in this class of cases may be constipation, injury or heavy lifting or heavy work. These things cause irritation of the spinal and sympathetic plexuses of nerves and they irritate the muscles so that they tilt the pelvis and when the pressure and contraction becomes great enough the pain will appear in the sciatic nerve.

Most of these cases which absolutely fail to reach a cure under medical treatment can be cured if the examiner makes a correct diagnosis as to the causative factor, and then makes an intelligent effort to eliminate the cause. The detection of the irregularity or deformity is an easy matter if the proper method is pursued. Place the patient on his back and have him lie as flat as possible and relax all the muscles of the lower extremities, and then bring the heels together, so that the point of contact will be on a plane drawn through the body longitudinally bisecting the symphysis pubes, internal condyles,

and the internal malleoli, when it will be found that there is a difference in the length of the legs, which may run from half an inch to two inches in extreme cases. To further make sure of which is the affected leg, flex the leg on the thigh and rotate inward and make palpatation on the inner side of the anterior superior spine of the ilium, and on the affected leg, tenderness and some thickening will be apparent to the touch.

Treatment. The treatment that I rely upon at this time, and have for three years, is mechanical vibratory stimulation, exclusively. This method offers more than any other treatment advocated for the relief and cure of sciatica that I have herein mentioned or in others which I have tried. It has also one desirable feature not before met with in treating sciatica, and that is it will in every case give temporary relief, and if used intelligently give permanent relief. In two hundred cases treated in the New York clinic, treated by this method and none other, only three cases required more than ten treatments. I have in my own practice, in sixteen months, discharged twenty-six cases of pain in the sciatic nerve as cured. These cases are all within my reach, and so far as I have been able to learn there has not been a single case of return of pain.

The action of mechanical vibratory stimulation on a nerve is as follows: Applied to a nerve or plexus of nerves composed of spinal and sympathetic nerves, especially as are found in the interspaces between the transverse processes of the spinal column, with a moderate pressure and a medium length stroke for from five to twenty seconds, the impulse transmitted is stimulative in character, and by the aid of the rami communicantes is transmitted to both posterior and anterior spinal nerves, and is further transferred through these nerves to their terminal nerve endings. With a long stroke and deep pressure long continued, for a period of from thirty seconds to two minutes, the effect is to inhibit the nerve, and this impulse is carrried along in like manner to the terminal nerve endings, and this is so in both cases, stimulation or inhibition (depending on the manner of applying the vibration), whether the nerve be motor, sensory or nutritive.

The method of treatment by mechanical vibratory stimulation is

as follows: The first consideration is to relax all tight and contracted muscles. This is done by inhibiting their nerve supply as outlined above, then after the pressure is removed, the next desirable result is the relief of pain, which with this method is an easy matter, and can be achieved by applying the vibratrode over the trunk of the nerve at the sciatic notch, making deep pressure, with a long stroke for a period of from thirty seconds to two minutes as seems necessary, and the pain will cease while on the table, lasting in the first treatment usually several hours, and later becomes permanent, after all pressure has been permanently removed. When there is no contracted muscle or no tippid pelvis, it is well to treat methodically all the interspaces the entire length of the spine beginning at the first cervical vertebra and continuing down to the sacral, with a longer and heavier stroke over the last lumbar sacral and over the sciatic notch, and even following up some of the branches of the great nerve in the thigh and leg; then the patient should be turned on his back, and stimulative vibration be given to the affected leg, beginning over the femoral artery and the largest branch of the lumbar plexus, the anterior crural nerve at the base of Scarpa's triangle and following through Hunter's canal.

To reduce a tipped pelvis, first have the patient lie on his belly and relax all the lumbar muscles, and if he has a short leg turn him on his back and relax his pelvic muscles, and then turn him on his side so that his short leg is uppermost, then flex the upper or short leg on thigh and the thigh on the abdomen, and the knee placed against the operator's shoulder, then place one hand on the anterior superior spine of the ilium, exerting pressure downward and backward, and the other hand on the tuberosity of the ischium, making pressure downward and forward; exert strong pressure with both hands and body until you feel the pelvis give, and you will find on again measuring the length of the legs as described above, that the pelvis has been moved a considerable distance.

Case I.—Man, aged 45. Occupation, blacksmith. History: Two years ago had acute attack of inflammatory rheumatism, from which he recovered after a siege of about three months; about six months since he began to have pain in his knee, which he immediately thought was a return of his former rheumatism, in fact he informed me that

he had taken treatment from a physician for "rheumatism;" pain was so severe at times that he walked with a limp, and again it would disappear and as suddenly re-appear with great severity, lasting for irregular periods.

Examinations: Patient was examined in the usual way indicated above for anatomical irregularities. Spine seemed normal in both muscles and bones. The first glance at the gluteal region showed a prominence over one pyryformis muscle; pressure upon this muscle at once produced his characteristic pain at the knee, and, with the exception of the tenderness produced by heavy pressure over the pyryformis, it did not produce pain at any other point down the nerve; there was no swelling nor discoloration of the knee. Incidentally, the patient told me that his former physician had never examined his back and had only grasped his knee at one time through his trousers.

Treatment: Mechanical vibratory stimulation was used over the lumbar and sacral interspaces and muscles, and over the pyryformis muscle for about five minutes. This treatment was given three times every other day with positive relief after the first treatment, and after six months of hard work there has been absolutely no intimation of any pain of any description.

Case II.—Man, aged 50. Farmer; had been the victim of sciatica for over two years, had been treated by osteopath, electricity, hot-air baths and medicine, in fact, I myself gave him electricity in the form of the static wave and hot-air baths for a period of three months, with no results except to aggravate the condition.

Examination: He walked with an extreme limp, and at times went on crutches; pain was present practically all the time and very severe in the entire leg and lumbar region, so severe that he had resorted to morphine as a last resort. The pelvis was tipped to a remarkable degree and a comparison of the relative length of the two legs showed a shortening of two inches and a half in the affected leg, and especially on the inside of the thigh anteriorially.

Treatment: He was given mechanical vibratory stimulation daily for ten days, and several efforts were made to replace the tipped pelvis, but owing to the inability of the patient to flex his leg upon his thigh it was unsatisfactory, and after two months' treatment at irregular intervals, I had reduced the shortness to one inch and had completely

stopped the pain, and it has remained so for three months, but he walks with a limp, and always will. However, I really believe if he had had the benefit of mechanical vibratory stimulation during his first year of suffering he could have been cured.

Case III.—Mrs. M., age 38, mother of five children. History: Had phlebitis, or "milk leg," after fourth child, and since that time always had trouble with this leg, and about one year previous had begun to have pains around the hip and extending down the leg, which had been greatly increased in severity; had only taken medical treatment.

Examination: There was a shortening of the affected leg of one half inch; the lumbar muscles on this side were also tight and tender, numerous varicosities abounded from the middle of the calf up above the knee.

Treatment: Mechanical vibratory stimulation, used every other day for ten days, applied over the lumbar muscles on both sides and over the sciatic notch on the affected side, and the brush treatment used over the entire calf and thigh. Three months after discharge she came to my office and said that she had succeeded in achieving a woman's greatest ambition—raising a dust "cleaning house"—without any inconvenience whatever, and for the first time for several years.

Case IV.—Mrs. P., housewife, age 35, mother of seven living children had also had "milk leg" after one confinement, and had suffered almost continuously since then with pains, beginning in calf of leg and gradually getting more severe in the hip, until now she walked with a cane and a distinct limp.

Examination showed a tipped pelvis, and the affected leg one and one-half inches short. Numerous varicosities were also noticeable to a great extent from the ankle to the mid-thigh.

Treatment: Mechanical vibratory stimulation was used for fifteen treatments, and one effort was made to reduce the tipped pelvis after the fifth general treatment, and with complete success. She was discharged after the fifteenth treatment as cured, the varicose condition was much lessened, but she was advised to wear a silk elastic stocking as a support for these very large veins.

These two last cases show that this condition of septic phlebitis after childbirth may be followed in years or even months by a sciatica, and in both cases the effect of the treatment was an allayment of the condition in the veins, but certainly not a cure.

Selected Articles.

Facts and Fallacies Concerning Interstate Reciprocity in Medical Licenses.

By James A. Egan, M. D.,
Secretary Illinois State Board of Health.

The fallacies concerning interstate reciprocity in medical licenses arise from the very general misconception or lack of understanding of the facts and conditions governing medical licensure. The forms of reciprocity advocated by many physicians would, if enforced, result in the nullification of the provisions of the medical practice acts of many states. These laws have been secured, in the majority of instances, through the efforts of the physicians of the several states, who would naturally be loath to see their labors set at naught.

The chief fallacy in interstate reciprocity, however—and one can hardly read a medical journal of the present day without being impressed how general this misconception is among medical men—is due to a lack of knowledge of the powers conferred upon the states—or rather, retained by the states—and amply recognized by the preamble to the constitution of the United States.

That each state has power to regulate, by general laws, the practice of medicine within its jurisdiction, has frequently been affirmed by the Supreme Court of the U. S.—which in unequivocal terms has declared that the right to practice medicine is not a privilege or immunity guaranteed to citizens of the United States under the Fourteenth Amendment of the Constitution. Yet, notwithstanding this—notwithstanding the positive declaration of Mr. Justice Field in the case of Bartmeyer vs Iowa (18 Wall, 129), that no one, to his knowledge, pretends that the Fourteenth Amendment to the Constitution interfered in any respect with the police power of a state,—we have presented to

us, almost daily, by physicians who are presumed to have given the matter much thought and study, proposed legislation, which, if enacted, would abrogate the police power of the state, and which could not be enacted without material amendment to the Federal Constitution.

Why this should be it is difficult to say. No one expects the busy practitioner, whose time and attention are absorbed by the professional exactions upon him, to be conversant with the intricate problems affecting interstate reciprocity. He naturally looks to the board of registration or examination of his state whenever he desires information on the subject—which is seldom.

We do, however, look to those who attempt to speak, ex cathedra, in the matter, to possess at least a fair knowledge of the fundamenal principles of the Constitution of the United States and the incontestable powers of the state.

I have referred to the police powers of the state—the power under which a state regulates the practice of medicine. In the language of the Supreme Court of the United States, in the case of Dent vs West Virginia, (129 U. S., 114), "it is the power of a state to provide for the general welfare of its people, and authorizes it to prescribe all such regulations as in its judgment will secure or tend to secure them against the consequences of ignorance and incapacity, as well as deception and fraud."

In regard to this same power, Mr. Justice Brown, in the case of Lawton vs. Steele (152 U. S., 136), says: "The extent and limits of what is known as the police power have been fruitful subject of discussion in the Appellate Courts of nearly every state in the Union. It is universally conceded to include everything essential to the public safety, health and morals."

Mr. Justice Harlan, in a more recent case—Jacobsen vs. Massachusetts, (25 S. C. R., 358), speaks still more decidedly concerning the police power of a state, which he terms: "a power which the state did not surrender when becoming a member of the Union under the Constitution." He says further: "Although this Court has refrained from any attempt to define the limits of that power, yet it has distinctly recognized the authority of a state to enact health laws of every descrip-

tion; indeed all laws that relate to matters completely within its territory, and which do not by their necessary operation affect the people of other states. According to settled principles, the police power of the state must be held to embrace, at least, such reasonable regulations established directly by legislative enactment as will protect the public health and the public safety."

The Supreme Court of Illinois has had much to say concerning the extent of the police power of the state. In the case of Lakeview vs. Rosehill Cemetery, (70 Ill., 191), the Court held that the "police power of the state is co-extensive with self-protection, and is not inaptly termed 'the law of overruling necessity." Speaking further of this power the court said: "It is the inherent and plenary power in the state which enables it to prohibit all things hurtful to the comfort, safety and welfare of society. It may be exercised to control the use of property or corporations as well as of private individuals." The State Supreme Court has also held at different times that "all rights, whether to things tangible or intangible, are subject to the general police power of the state."

Further upholding the police powers of the state, the Illinois Supreme Court said, in the case of Booth vs People, (186 Ill. 48), "the law of the land may expressly prohibit and make criminal the doing of an act which, in the absence of such law of the land, would constitute a liberty or property right within the meaning of the constitution, even though such act be not within itself immoral." In the case of Williams vs People, (121 Ill. 84), the Suprenme Court said regarding the police power: "It is the common exercise of legislative power to prescribe regulations for securing the admission of qualified persons to professions and callings demanding special skill; and nowhere is this undoubtedly valid exercise of the police power of the state more wise and salutary, nor more imperiously called for than in the case of the practice of medicine. It concerns the preservation of the lives and health of the people."

To return to interstate reciprocity,—although we have not yet departed from this subject, for all laws providing for reciprocity must be based on the acts to regulate the practice of medicine in the state, and

these acts are directly dependant upon the police power of the state,—it may be well to devote a little attention to the proposed legislation referred to in a previous paragraph.

In January, 1906, the New York Medical Journal offered a prize for the best essay on Interstate Reciprocity in Licenses. Several physicians entered the contest; and among them may be especially noted Dr. S. A. Knopf, of New York, a world-renowned authority on the treatment of tuberculosis. Dr. Knopf, however, did not compete for the prize. Of the several essayists, ten offered the following propositions in the order named. To these I wish to call particular attention. They were as follows:

(1) The creation of a National Board of Examiners, acting under laws passed by Congress;

(2) The creation, by the Federal government, of a department of Medical Affairs, the passing of whose examination would entitle the physicians to practice anywhere in the United States;

(3) A comprehensive set of national government examinations;

(4) A voluntary Board of National Examiners, the licenses of which would be accepted in the several states;

(5) The appointment, by the President of the United States, of Examiners at large, who would hold examinations in the Capitol of each state or territory;

(6) The National control of all questions pertaining to the examining and licensing of all physicians;

(7) A National Board of Examiners under the Federal law;

(8) A central board at Washington, which would prepare examination questions for the several state boards and afterwards grade the answers;

(9) A Board of Medical Examiners created by acts of Congress;

(10) And last, the creation of a National Examining Commission, to be appointed by the American Medical Association,—this Board to prepare the questions for examination and send them to each state board, which would have the power to grade them, the Commission, however, to be empowered to appoint one or other members in each state to see that the examinations were properly conducted.

Assuming that it was the intention of the essayists to offer a practical solution of the reciprocity problem, I leave it to your judgment to determine whether any one of the physicians above quoted has progressed far toward the accomplishment of his purpose.

The regulation of the practice of medicine comes within the police power of a state, a power of which sufficient has been said in previous paragraphs, and is in no wise subject to Federal control. To put it more plainly, the United States Government has no more to do with the regulation of the practice of medicine in a state of the Union—a regulation which leaves the field open to all who possess the prescribed qualifications—than it has to do with the regulation of the form of services in the church in which the Illinois State Medical Society is now holding its meeting.

I have nowhere seen the actual conditions existing summed up more clearly, more concisely or more fairly, than, in an editorial in the New York Medical Record of March 31, reading as follows:

"It is natural for a physician duly licensed in another state to ask why the assumed privileges and immunities as a physician of that state do not protect him from the necessity of passing a further examination when he comes to New York to practice. A full comprehension of this question in all its bearings depends upon a proper understanding of the history of the United States. Before the several states adopted the Constitution of the United States in 1789, each of these several states was a complete independent sovereign. When the Constitution was adopted, the national government was thereby created with certain powers; and those powers resulted from the surrender by the individual states of certain features of their own sovereignty. In order that the sovereignty of the different states should not be altogether merged in that of the central government, the following amendment was added to the Constitution: 'The powers not delegated to the United States by the Constitution, nor prohibited by it to the states are reserved to the states respectively or to the people.'

"It has thus resulted that the individual states were in no wise divested of their sovereignty by the adoption of the United States Constitution except so far as that instrument shows an express surrender of

their sovereignty. In all other respects they have retained it. Every state, for example, has retained unimpaired its original power to make police regulations, included among which is the right to make laws concerning the regulation of the practice of medicine. This proposition has been fully determined by the supreme court of the United States, and the courts of the individual states have uniformly sustained the power of their states to pass legislation of this character."

And now let us consider for a moment something of the character of the solution of the problems of interstate reciprocity offered in the competition to which I have referred—offered in the face of the legal limitations which surround us in the selection of our remedies. It is of interest to state that the prize was awarded to one—Dr. William Warren Potter—who, in his solution, suggested no attempt to lodge the power of controlling medical practice or reciprocity in other hands than those of the state government—a fact which is significant of the solidness of his argument, and incidentally, indicative of his familiarity with the law. The members and officers of State Boards competing in this contest in no instance recommended Federal control. They were apparently heartily in accord with the principles set forth by Judge Cooley in his work on Torts, as follows:

"No one has any right to practice law or medicine except under the regulations the state may prescribe. To practice in the courts or to practice medicine is not a privilege of citizenship, and is, therefore, neither given or protected by or under the Civil Rights Act of Congress or the new amendments to the Constitution. The privilege may be given to one citizen and denied to the other, and other discriminations equally as arbitrary may doubtless be established."

But even Dr. Potter, as clearly as he seems to have grasped the legal aspect of interstate reciprocity, fails to go so far as the facts would warrant. He is found to say: "One of the early suggestions was a national examining board, but this was abandoned very soon by the most careful observers because it was apparent that the general government would not usurp the police power of the states for the purpose named." It would have been more in accordance with facts had Dr.

Potter, said that "the general government could not usurp the police powers of the state, and parenthetically, would not if it could."

The solution suggested by Dr. S. A. Knopf, deserves special consideration, coming as it does from one of such recognized authority on hygiene and preventive medicine.

Dr. Knopf advocates the creation of a national organization—a Federal Department of Public Affairs—which should be empowered as an examining and licensing body, and whose certificates should be accepted as authority to practice medicine and surgery in any state or territory of the Union. He admits that such an organization could not be created at once, and recommends, in the meantime, a temporary medical board, voluntary of course, which shall perform the functions of a United States examining commission.

For reasons which have been set forth in detail, this scheme is entirely impracticable and impossible of execution at the present time. We are seeking the possible—not the impossible. No plan which contemplates the assumption of the control and regulation of medical practice by the Federal Government could become operative without amendment of the Constitution of the United States, and such an amendment could only be obtained by recommendation of two-thirds of the members of both houses of Congress or of the legislatures of two-thirds of the states of the Union and upon such recommendation receiving the sanction and approval of the legislatures of three fourths of all of the states. It is beyond the realm of possibility that the Federal Constitution which has remained unchanged, even in the face of grave national problems, practically since the close of the Civil War, would be amended by the people so as to permit a physican licensed in one state to practice in another without a further examination; would be amended so as to deprive the several states of their police power—a power which the states would not surrender in 1789. We are not living in Utopia, and the millenium is not at hand.

Dr. Knopf states with approval the fact that in all European countries the medical examination entitles the successful candidates to practice throughout the entire nation and all provinces; that in Germany

the man who has passed his examination before the Government Board has a right to practice in any of the several kingdoms or minor states. Not a great while ago I was favored with an expression of opinion of an eminent German physician who had been licensed to practice in the German Empire, that it might be better if these conditions did not exist in the Fatherland. He seemed convinced that if every minor kingdom, state or province had the power to say who should or should not practice within its confines, the Empire would be far freer from charlatanry and quackery. Fortunately for the physician, his opinions were expressed on this subject on this side of the Atlantic. Had they found utterance within the realms of the Kaiser, the physician might now be serving a sentence of ten or more years for lese-majeste.

But it is hardly necessary that we should pattern our institutions or our practices after those of foreign nations, especially those in which a whispered criticism of the regulation of public affairs may subject the offender to imprisonment "which may be for years and may be forever."

However, if it may seem advisable for us to determine the value of our standards by those of foreign countries, it is not necessary that we cross the seas to obtain our statistics. We can procure information from countries which are nearer at home, and concerning which our information is more extensive and more reliable.

On our northern borders we find British dominions, consisting of the Dominion of Canada and the Island of Newfoundland. Each of the several provinces in this vast territory enacts its own medical laws. A license issued in one province does not entitle the holder to practice in another. A license issued in Great Britain is recognized in but a few of the provinces, and then only under special conditions. The Federal Government exercises no control over the provinces in the matter of medical legislation. While two or three of the provinces have entered into reciprocal relations, there is no general reciprocity between the provinces.

The proposition to create a National Examining Commission, to be appointed by the American Medical Association and to perform the

duties described by one of the essayists, is so obviously absurd that consideration here would seem an unnecessary imposition upon your time and patience. However, it may be well to touch upon this subject for a moment, lest silence concerning it be misconstrued.

This proposed National Examining Commission bears a very close relationship to the voluntary Board of Medical Examiners advocated with such enthusiasm but a few years ago, after it was realized—by some—that the attainment of the much discussed National Board of Medical Examiners was beyond the bounds of possibility.

It may be accepted without question that, if the various State Boards of Medical Examiners would delegate the powers conferred upon them, by state law to any voluntary organization, that organization would be the American Medical Association, but it is exceedingly doubtful if there is a board that could, if it would, delegate its powers to any body which had not legal authority to perform its functions.

In this connection it may be noted that, in 1893, an effort was made to give the Association of American Medical Colleges the right to determine those colleges which should be accepted as in good standing with the Illinois State Board of Health. This effort brought forth a vigorous remonstrance from the late Dr. Nathan Smith Davis, a man who certainly would not be accused of disloyalty to the Association of American Medical Colleges. This remonstrance, which was addressed to a member of the Illinois State Board of Health read as follows:

Dear Sir:— "Chicago, August 23, 1893.

Your letter relating to the Association of American Medical Colleges is at hand. The Association named is a voluntary organization of such medical colleges as chose to appoint delegates and comply with its Constitution and By-Laws. It has no legal status or authority to fix a standard for any college not belonging to it. Consequently it is absurd for the Illinois State Board, legally charged with the duty of determining what standard of requirements a medical college must have to entitle its diplomas to recognition, to attempt to delegate that duty to a number of voluntary college associations or societies, any one of which may change its rules every year. The action of the Illinois State Board,

in adopting the rule you mention, was a ridiculous abandonment of the claim to regulate the education and practice of medicine in this State, persistently exercised during all its previous history.

Yours truly, N. S. Davis."

Due consideration must certainly be given to the views expressed by the man who was aptly termed the Nestor of the medical profession, of the United States, Dr. N. S. Davis, the "Father of the American Medical Association," even by the most ardent advocate of National or Voluntary organization control of state medical affairs.

So much for the common fallacies concerning interstate reciprocity—the fallacies in the midst of which we find many of the pertinent facts upon which a satisfactory adjustment of this subject must eventually be based.

Today we hear much of reciprocity A few years ago we heard little or nothing. In 1898 when a bill of which the present medical law of Illinois was the outcome, was under consideration by the Illinois State Medical Society, reciprocity was not even suggested. A physician to whom I mentioned this fact recently, stated that the omission of reciprocity from the discussion was due to the fact that at that time a diploma admitted to practice in the majority of states in the Union. As a matter of fact, over one-half of the states and territories even then required an examination for admission to practice.

But while, as I have said, we now hear much of the advantages of a reciprocal relation with our sister states, the reciprocity discussed and advocated at least in Illinois, is that applying to certificates issued after examination. No other form of reciprocity seems to possess much interest for the physicians of the State. This opinion is forced upon me after a perusal of voluminous correspondence on the subject in the offices of the State Board of Health. In fact practically every communication received at the office of the Board on the subject of reciprocity in the case of old practitioners, comes from licentiates in other states or those who desire to remove to other states.

It was but a short time ago that I received a vigorous protest from

a physician in central Illinois, against the action of the State Board of Health in declining to license without examination, a licentiate of an adjoining state who was licensed ten years ago upon presentation of his diploma. I have just ascertained that my correspondent desires to remove to the state in question. His protest was born entirely of his personal desires and his self-interest, and not of any sentiment for the elevation of the standards of medical practice or the betterment of the conditions of practice within the State.

The Illinois State Board of Health reciprocates, not under any specific authority of law, but under its general powers. Reciprocity, however, is impossible on any other basis than after examination, for the medical law of Illinois requires an examination.

Provision for obligatory examination has been sought for by the medical profession of Illinois for many years, in order that there might be brought about "the separation of the license from the degree," to use the apt expression of the Chairman of the Committee on Legislation of the State Medical Society in 1899.

The medical law on the Statutes from 1887 to 1899 had no peer in the United States, as far as it went,—but it did not go far enough, according to the view unanimously expressed by the Illinois State Medical Society at different times.

An examination was called for by the several thousand physicians of the State, who endorsed the medical bills of 1899 and 1903—which bills were also endorsed by the State Medical Society at the Galesburg (1898) and the Quincy (1902) meetings.

The present Medical Practice Act is, in fact, the result of the efforts of as large a representation of the medical profession of the state as can be aroused to activity for any work of advancement of medical education.

It owes its being primarily to the efforts made by the Illinois State Medical Society to elevate the standards in Illinois between 1897 and 1899. A bill introduced in 1897 received but little consideration in the Legislature. At the 1898 meeting, the State Society, by unanimous vote, unqualifiedly endorsed the bill presented. The chairman reported that he had found the profession almost unanimously in favor of its

legislative enactment. This bill so favorably and generally accepted, provided for the examination of all persons desiring to commence the practice of medicine in the state, but as stated, contained no provisions for either immediate or ultimate reciprocity.

This bill was submitted by physicians who had given the matter exhausitve study and consideration—such men as Pettit, Brower, Graham, Hamilton, Moyer, J. B. Maxwell, and others whom I might name. At the meeting at which this bill was presented for ratification by the State Society (1898), Dr. Harold N. Moyer read a paper on Needed Medical Legislation in Illinois, which seemed to represent the sentiment of the Society's members. He made a strong plea for the enactment of a bill along the lines suggested by the Committee. He referred to the defects in the existing law, and stated that the most serious errors in the control of medical practice were due to the recognition of diplomas, and said that "Legislation was called for which should at once eliminate the diploma as a basis of qualification and substitute a state examination."

It is to be assumed that Dr. Moyer advocated an examination which should apply to all practitioners. If he contemplated the exemption of any physicians from such examinations, he failed to say so. In fact he stated that the *raison d'etre* of many schools was found in the fact that the diploma was equivalent to a license to practice. These sentiments, as I have said, seemed to bear the approval of the members of the State Society and of the medical profession in general, and were the provisions which seemed to be regarded essential to a satisfactory medical practice act.

At the Quincy meeting of the State Medical Society in 1902—at a time when interstate reciprocity in medical licenses had become a much more common topic for agitation, the bill presented as improving the conditions of medical practice in the state, made provision for reciprocity, but only in case of certificates issued by other boards after examination. This bill also was unanimously endorsed by the Illinois State Medical Society.

Reciprocity was also provided for in the medical practice bill introduced in the General Assembly of 1903, at the instance of the Com-

mittee on Medical Legislation of the Illinois State Medical Society, but in a further section the proposed State Board of Medical Examiners was authorized to accept as equivalent of an examination in part of the subjects required, satisfactory evidence of one or more years of reputable practice of medicine since graduation. It is evident that those who framed this bill intended that the so-called "old practitioner," he who was licensed in other states merely on the presentation of a diploma, should qualify in Illinois, if he intended to practice therein, solely through the medium of an examination.

From the attitude which the Illinois State Medical Society and the medical profession of the state have taken toward the enactment of laws to regulate the practice of medicine in Illinois, it is to be fairly assumed that the sentiment is almost unanimous that no one shall be admitted to practice until he has demonstrated, by examination his educational qualifications and attainments, and it is but fair to presume that no form of reciprocity contemplated in later years should be based upon other than this general principle, and that its privilege should be extended only to those who had passed examinations, and had met educational requirements practically equivalent to those exacted in our state, under the law in force.

The only protest against such a form of interstate reciprocity which deserved serious consideration was the protest from the older practitioners of medicine in other states, who while in many instances unqualified to pass satisfactory examinations in the little-used elementary branches of medicine, are unquestionably thoroughly qualified for the practice of the profession. But protests of these older members of the profession have been considered and have been acted upon by the Illinois State Board of Health in a way which does not alter the general requirements, which does not violate the specific requirements of the statutes, and which has proven equally satisfactory to the state and to the old practitioner. By a resolution passed by the Illinois State Board of Health at its meeting in October, 1904, the old practitioners of other states are allowed a credit of five per cent. on the required seventy-five per cent. of successful answers for each five years they have been in active practice.

The New York Medical Journal in commenting upon this action by the Illinois State Board of Health voices the general approval with which the resolution has been received, saying editorially:

"The Illinois State Board of Health, one of our most progressive sanitary bodies, has lately adopted a resolution that will materially aid the established practitioner, rusty though he may be as to his elementaries, to pass its examination for the license to practice. By the term of the resolution, on and after January 1, 1905, the Board will accept as an equivalent of a part of the examination required 'satisfactory evidence of five or more years of reputable practice of medicine and surgery since graduation, and will allow a credit of five per cent. upon the required average of seventy-five per cent. for each period of five years of such practice on the part of a candidate for a certificate.' We hope that this move in the direction of justice will be followed by other state examining bodies."

The trend of opinion expressed by medical editors, on what I may term the "Illinois method of dealing with the old practitioner," indicates that its adoption has contributed materially to the right of the Illinois State Board of Health to the title so graciously conferred upon it by the editor of American Medicine—"the leader in practical reciprocity."

By the establishment of reciprocal relations with various states having practically equivalent requirements of preliminary education and examination, and by providing equitably for the older practitioners upon a sliding scale in constant relation to the years which have elapsed since medical college sudy, the State Board of Health seems to be carrying out what were certainly the wishes of the medical profession when our present laws were agitated—and that without working hardship upon the only class which seems to have legitimate grounds for a plea for special consideration.

But it is frequently said that the methods of examination in Illinois now in operation do not meet with the approval of a large per cent. of the medical profession of our state. To be sure, the statements to this effect are made almost solely by physicians of other states, and by members of State Boards who advocate reciprocity on the basis of

diploma licensure; still as they have been, and are sill being made. they call for attention and consideration.

If the law is unsatisfactory then the law should be amended, and amended it can easily be if the medical profession of the state so will.

I cannot believe that there is any considerable number who would advocate any deviation from the policy of examination of applicants. But accepting examination as desirable for recent graduates, is it, as believed, the desire of the profession that we enforce the rule in the case of the older practitioners also?

Is it wiser that we should continue the examination of old practitioners from other states who desire to enter upon practice in Illinois, making ample allowance for their years of practice, as is done under the provision of the present law, or to secure an amendment to the law, which will permit the State Board of Health to license, without examination, graduates of reputable institutions, who possess the licenses of other states issued seven or more years ago?

As you are doubtless aware, a number of western states have adopted a qualification for reciprocity which provides that a certificate of registration issued by the proper board of any state, may be accepted as evidence of qualification for reciprocal registration in any other state, provided the holder of such certificate has been engaged in the reputable practice of medicine in such state at least one year, that he was the possessor of a diploma issued by a medical college in good standing, and that the date of his diploma was prior to the legal requirement of the examination test in such state.

The Illinois State Board of Health has been urged to adopt this qualification, but has constantly declined to do so—first, because the law does not permit the licensing of physicians except after examination; and second, because the members do not believe in the practicability of this form of reciprocity. The adoption of such a qualification would mean that the Illinois State Board of Health would be compelled to license, without an examination, the holder of a diploma from a seemingly reputable medical college who obtained a license in any other state previous to 1899, on the presentation of a diploma, when the license was his for the asking.

It is significant that this provision has been urged upon the Illinois State Board of Health principally by physicians residing outside of the State, and would not be expected, if entirely free from selfish motives, to be so markedly solicitous regarding the welfare of Illinois physicians. During the past five years, in which time this matter has been frequently agitated, the State Board of Health has not been asked to adopt this qualification by a dozen Illinois physicians. Those who urged this form of reciprocity in Illinois either had removed or were desirous of removing to other states. I have never heard a prominent practitioner of Illinois raise his voice in support of the qualification, although this form of reciprocity has been advocated constantly for five or more years past by the boards which have adopted it, and has been given wide publicity in the Journal of the American Medical Association and other periodicals.

If the members of the Illinois State Medical Society favor this form of reciprocity, the members of the Illinois State Board of Health wish to be advised of the fact in order that they may properly govern themselves. The reciprocity desired by the members of the medical profession of Illinois is the form of reciprocity which will be advocated and enforced, when possible, by the State Board of Health.

Intimately associated as I have been with physicians of the State of Illinois in their efforts to secure higher standards of medical education, I cannot resist the conclusion that the vast majority do not desire any measure which will reduce or lower the Illinois requirements of medical practice.

As regards general interstate reciprocity, I am impressed that it may be obtained with an elevation rather than a lowering of standards and requirements, without the intervention of the Federal government; without revision of the Constitution of the United States; and without very radical changes in the laws of the various states. In fact it is my impression from the progress already made in this direction, that the several states will sooner or later adjust themselves to the conditions necessary for the establishment of proper reciprocal relations without any material statutory changes. Those states which will require further

legislation to permit interstate reciprocity in medical licenses are in the minority.

But when further legislation is called for the most important point is to secure practically uniform medical laws—laws which will give to the boards of the various states practically the same powers and practically the same limitations, and which will establish practically the same requirements of medical education, or authorize their several boards to do so. Absolute uniformity of medical practice laws is hardly within the range of possibility, nor is absolute uniformity in any way essential. With laws practically the same, there should be a provision in the statues making it obligatory upon boards to extend reciprocity to states which maintain the same standards for medical licensure. There are a few states in the east and west, whose laws are such that reciprocity could be established by the action of their examining and licensing boards, and yet these boards arbitrarily refuse to consider reciprocity under any circumstances, even with those states having requirements superior to their own. Incidentally, it is the arbitrary attitude of these few states which interferes more than any other factor with the attainment of the desired end, and the passage of reasonable rules by these states must be the first step towards the establishment of general interstate reciprocal relations. We may overlook the failure of a board to embrace so popular a measure as interstate reciprocity if the state laws prevent such action; but it is exceedingly difficult to palliate the attitude of the board empowered to act and yet which persistently refuses to take advantages of its power.

Each state could and should retain the right to accept or reject any individual applicant, as might be determined by moral character and the board's individual estimate of the good standing of the college from which he is graduated. Ample and fair provision should be made for the old practitioner, as is done in Illinois, and thus, in my belief, proper reciprocity can be secured without an entire re-organization and revolution of the medical practice laws of the states of the Nation.

ADDENDA TO PAPER.

Attention has been directed in the foregoing paper to solutions of the problems of interstate medical reciprocity, which have been suggested

recently. It will not be out of place to discuss here the following recently published opinions on the subject of medical laws, especially as these come from such an eminent authority as the President of the American Medical Association.

In his presidential address delivered at Boston on June 5, 1906, at the annual meeting of the American Medical Association, the President, Dr. William J. Mayo, said:

"Another question of great importance is that of reciprocity in medical license. The conditions are now well-nigh intolerable and *restrain the individual freedom guaranteed by the Constitution. The boundaries between the states are imaginary lines; yet a physician on one side of the border cannot relieve human suffering* on the opposite side without becoming amenable to the law or *subjecting himself to vexatious examinations which he has already successfully passed in his own state.* This must be met and speedily by agreement between examining boards as to the minimum of requirements."

In connection with Dr. Mayo's remarks the editor of the Journal of the Association, in the issue of June 9th, says: "there are few who will not agree with him in what he says in regard to state licensure and reciprocity."

It may be that there are many who will agree with Dr. Mayo that the conditions now existing "are well nigh intolerable," but with all respect to President Mayo and the editor of the Journal of the Association, there are but few who have given the question of National and state control of the regulation of the practice of medicine proper consideration who can agree that the conditions set forth by Dr. Mayo actually exist.

In the logical consideration of a problem, we must deal with facts, not with fancies. In an attempt to solve a problem we must, if we are to attain success, deal with the finite, not the infinite; the possible, not the impossible; with practice, not with theory.

The right to practice medicine is not a part of the individual freedom guaranteed by the Constitution. As has been aptly stated "the individual states were in no way divested of their sovereignty by the adoption of the United States Constitution, except so far as that instru-

ment shows an express surrender of their sovereignty." The regulation of the practice of medicine comes within the police power of a state, a power which the states have retained unimpaired since 1789.

"The boundaries between the states are imaginary lines," in but imagination. In reality the state's boundary lines are as stable and definite as the National boundary lines. State lines existed prior to the National lines. In the original establishment of the U. S., the state lines were the definite and well defined lines, while the Federal lines have remained expansive to be adapted to the extension of the states constituting the Union. The lines between Illinois and Indiana, where no geographical line of demarcation is to be found, is quite as definite and exact as the line between the United States and Canada, or that between Austria-Hungary and the Russian Empire.

The necesity for a physician on one side of the border of a state relieving human suffering on the opposite side, is not obvious in case of dire distress, where an emergency, exists. Under these circumstances a border line physician can practice without let or hindrance, and no state board will interfere with him. But there is seldom an emergency, seldom a case of dire distress, which cannot be given attention by the physicians of the state in which it occurs. Nearly every state has its quota of capable and qualified physicians.

But it has been said that a citizen of one state taking ill in another state cannot be attended by his family physician unless the latter be licensed in the state in which the patient lies. I deem it sufficient to call for statistics of prosecutions instituted in the various states on account of practice of this character. I refer now to practice in an individual case, by the bona fide family physician. I do not refer to the practice of the itinerant. I do not refer to the practice of the tourist who is often too prone to consider himself the family physician of all persons—and their friends, relatives and acquaintances—coming from his native state. I do not refer to the practice of the physician who, when summoned to another state to treat his patient, treats all who apply to him.

But even now the laws of nearly forty states permit the practice of physicians from other states in consultation.

It would be exceedingly difficult for any state, which must remain the controlling power in medical licensure until the constitution of the United States is radically changed, to draw a line which would limit the invasion of physicians from other states if the natural state boundary lines were ignored. The state line must be the logical and only practical limitation for the practice of the physicians of each individual state.

As to the limitations placed upon practitioners of the various states, the statements of Dr. Mayo are misleading. The restrictions upon those who have already successfully passed examinations in their own states are gradually disappearing under the present systems of reciprocity. Few physicians who have successfully passed examinations in their own states are required to pass examinations in other states. Thirty-seven states are now empowered to reciprocate, of these twenty-six do reciprocate. But it must be borne in mind that the percentage of physicians who have passed examinations of any kind in their own states is small.

It is but matter for remark, that the laity as a general rule have lited from Dr. Mayo's presidential address, that, among the majority of boards which have found reciprocal relations consistent with the laws under which they operate, a definite understanding has been reached in regard to the minimum requirements of medical education.

X-RAY BURNS.

At the 337th regular meeting of the New York Dermatological Society held Nov. 28, 1905, the subject of X-ray burns was taken up, and Dr. Henry G. Piffard, Emeritus Professor of Dermatology in New York University, according to the Journal of Cutaneous Diseases, "that he had obtained the most benefit in treating these conditions from Antiphlogistine, chloride of zinc, high frequency current and ultra violet rays."

Free to Physicians

A New Book,

Diet after Weaning

We have issued this book in response to a constantly increasing demand for suggestions on the feeding and care of the child between the ages of one and two years.

We believe you will find it a useful book to put in the hands of the young mother.

The book is handsomely printed, fully illustrated and is bound in cloth. We shall be glad to furnish you copies for your patients entirely free. For your convenience we print below a coupon.

MELLIN'S FOOD COMPANY, BOSTON, MASS.

Detach on this line

Mellin's Food Co.,
Boston, Mass.

Please send me a copy of your illustrated book Diet After Weaning

Yours very truly,

_____ *M. D.*

Glycozone

$(C_3H_6O_4 + C_3H_8O_3)$

ABSOLUTELY HARMLESS.

Indorsed and Successfully used by leading Physicians in the treatment of

DYSPEPSIA, GASTRITIS, GASTRIC ULCER and CONTAGIOUS DISEASES of the STOMACH and INTESTINES.

In order to prove the efficiency of GLYCOZONE, I will send a **$1.00 bottle free** to Physicians accompanying their request with 25c. to pay forwarding charges.

A copy of the 18th edition of my book of 340 pages, on the "Rational Treatment of Diseases Characterized by the Presence of Pathogenic Germs," containing reprints of 210 unsolicited clinical reports, by leading contributors to Medical Literature, will be mailed free of charge to Physicians mentioning this Journal.

Prepared only by

Charles Marchand

Chemist and Graduate of the "Ecole Centrale des Arts et Manufactures de Paris" (France)

57-59 Prince Street, NEW YORK.

The one distinctive feature of

Gray's Glycerine Tonic Comp.

is its uniform efficacy in debilitated patients of all ages---the child, the adult, the aged. It improves the appetite, creates digestive vigor, promotes assimilation and---most important---has no deleterious after effects.

Gray's Tonic has become the standard remedy for anaemia, malnutrition and nervous exhaustion, from whatever cause.

THE PURDUE FREDERICK CO., 298 Broadway, N. Y.

Editorial.

COLLABORATORS:

T. W. Ayers, M. D., Hwang-hien, via Chefoo, China.
J. T. Searcy, M. D., Tuscaloosa.
L. C. Morris, M. D., Birmingham.
J. A. Goggans, M. D., Alexander City.
W. W. Harper, M. D., Selma.
Frank T. Smith, M.D., Chattanooga, Tenn.
E. D. Bondurant, M. D., Mobile.
B. L. Wyman, M. D., Birmingham.
Thomas D. Parke, M. D., Birmingham, Ala.
W. H. Wilder, M. D., Birmingham,
D. F. Talley, M. D., Birmingham.

The Journal will be mailed on or about the 15th of the Month. Subscribers failing to receive it promptly will please notify us at once.

We cannot promise to furnish back numbers

SUBSCRIPTION $2.00 A YEAR, IN ADVANCE

The editor is not responsible for views expressed by contributors.

All communications should be addressed to THE ALABAMA MEDICAL JOURNAL, Birmingham, Ala.

The Medical Profession vs. the Newspapers.

It is but matter for remark, that he laity as a general rule have little knowledge of medical ethics, and yet it should not be surprising, in of the little effort made by the profession to educate them to an understanding of the subject, which the physician takes as a matter of course. It is true that each profession or trade has its ethics, but it is also true that they are widely different in each case, and in no profession is it so peculiar to itself as in the medical profession, and naturally so, in view of the serious relations that exist between the doctor and his

patient, involving the problems of life and death, and it would seem absurd to place medical ethics on the same basis of commercialism as the merchant who offers a "job lot" for sale. As the ever gullible public have had no instruction upon these points, which they think too finely drawn for this age of strenuosity, it is not surprising that they are made to believe the flamboyant account of "Doctor Charlatan."

It is therefore a matter of regret that the medical profession sits so quietly and indifferently and does not protest against the accessory part played by the newspapers, to which they subscribe, no doubt, as liberally as any other body of men Not only is column after column given over to the advertising doctors, but an endorsement from the paper also, setting forth the "remarkable" abilities of the advertisers. The medical profession as a matter of course suffers but little if at all from the "quack." It is the public which suffers, and as in the laws for the prevention of disease, in the pure food bill recently passed by congress, in the war on patent medicines, all of which have been instituted by the medical profession, there should be a protest raised against this venality of the press and, if not given that respect to which their patronage entitles them, they should at least withdraw their patronage.

Dr. George Augustus Ketchum.

While resting quietly in a St. Louis hotel after a tiresome trip from French Lick Springs, Ind., we were aroused by a bell boy who handed us a telegram from Mobile containing the information that Dr. Ketchum was dead. No words can give adequate expression to our grief at the death of this eminent member of the profession. No eulogy, however elegant and ornate, can fittingly ennoble him, since his own generous work, his magnificent ability and his magnetic personality furnish a tribute to his worth greater than even the best chosen words could hope to do.

Identified with the science and art of medicine for a period of sixty years George A. Ketchum represented the highest type of a medical man. Cultured, conscientious and strong he would have been eminent anywhere. No man whom we have known combined in himself so much

of strength as he. Eminently sagacious his greatest strength was exhibited at the bedside where his resources were practically unlimited. During a period of fifty years he easily commanded the largest clientele of any physician in Mobile, and justly so, because without invidious comparisons, as a practitioner of medicine, he towered like Saul of old above his fellows.

Always interested in medical organization he had since 1846 been an enthusiastic and influential member of the Mobile Medical Society, and contributed largely to the successful organization of the State Medical Association. Every honor that these two organizations could bestow upon him he received, and he discharged every official duty with honor to himself and credit to those whose franchise had given recognition to his eminent ability.

No man with whose life history we are acquainted had more devoted friends. None commanded greater confidence. Like a masterful great captain he moulded opinion, and led men by the force of his own inherent strength, and a personality which at all times evoked confidence and respect. To the younger men in the profession he was always kind, considerate and courteous. In fact, in his every relation with his professional confreres he was always actuated by the highest ethical principles.

A Prince in Israel has fallen. He had laid his earthly labors down, and his life so full of good and noble deeds should be an inspiration to others to perform well every duty, and to bend every energy to attain the high ideal swhich it is conceded that he reached. Alabama medicine had but one George A. Ketchum. The profession loved him and he loved them. Let us cherish his opportunities, and whose life work reredounded to the credit of the noble calling which he ornamented.—Mobile Med. & Surg. Journal

---

Correspondence.

Editor Alabama Medical Journal:

As a reader of your valuable journal, which is ever ready to discuss questions of interest to the busy practitioner, I wish to call attention

to one of the very annoying and vexatious conditions which every physician meets in his daily practice. This being a condition which no one physician can remedy, possibly by having it brought out in this way, the various medical associations will take it up and discuss the conditions and adopt a remedy.

There are throughout the South a large number of mutual aid insurance companies which have succeeded in placing policies with one-half if not two-thirds of the families of the working people. As every physician knows, these policies carry with them sick cards for the physician to fill out, which, if he does not give his time and patience to filling, the patient does not receive the weekly benefit.

There are several evils to the doctor in these sick cards, especially the time taken up in filling and the discontent created by them. When called to a case, after having made the examination, diagnosis, and given the advice and instructions of which the prescription is a part, the doctor is requested to wait a minute and "fill out my sick card." In the majority of cases a search of ten to fifteen minutes will bring the card. Sometimes there is no card and a visit to the neighbors is made in the hope of borrowing a card, as it is a necessity to fill out one of the company's printed blanks in order that it will be good. If the doctor should write a certificate on his prescription blank that Mrs. Smith is sick in bed under care—Malarial fever—and sign, this would not answer the company at all. They have especially worded cards which they insist must be filled, and that it is the doctor's duty to fill fill them out just as they are fixed.

Following is a sample:

FOR PHYSICIAN.

Name of person attended.....
Residence, Street ..... No.....Policy N.o.....
Date of first visit .....
Date of last visit .....
Date of member's visit to office.....
Name of disease or nature of injury.....
Was certificate filled at patient's residence .....
If diseased, is patient now confined to bed as result thereof?.....

And if so, should patient in your opinion be confined to bed for seven days from date of this certificate?.....
Is there external evidence of injury?.....
I HEREBY CERTIFY That I have visited (if disease, or seen if for injury) the above named person this.....day of.....190....
The attending Physician's signature.....
Post Office address.....
Street and Number .....

NO SICK BENEFITS PAID UNLESS
the Physician visits the bedside of the patient.

To show how much time it takes to fill—the name must be exactly as it appears in the policy; the policy number must be hunted up; the date of first visit must be obtained from the doctor's record; name of disease; was certificate filled at patient's residence? Then there comes the "I hereby certify"—and what is that for? The object of this part is to make it a piece of written evidence to be used against the physician in cases where legal complications arise. The signature of the physician is not sufficient, but he must sign a legal paper which may be brought into court and used against him as evidence that he is aiding and abetting fraud against the insurance company. Then the last sentence furnishes the key to the whole thing and caps the climax: *No sick benefit paid unless the physician visits the bedside and places his signature to the card and thus protects the company.* And what does he receive for the time consumed in filling out cards, looking up names and numbers of certificates, and doing clerical work for the company? Nothing but abuse. The agents of the company are instructed to use as an argument to induce persons to take policies that it is the duty of the doctor to fill out cards! Where does this duty come in? What does he receive for the extra time and labor? Only this: when a slight mistake occurs the company, ever ready to avoid paying a claim, invariably gives as an excuse that the doctor did not fill out the card right and they cannot pay; thus making the patient dissatisfied with the physician who has always before given satisfaction to his patient, and he loses the family practice because he has given his time and labor to the company which is boasting of doing a business of $50,000 to $100,000

a year! Growing rich on the protection of the doctors for which they pay nothing but discontent, and, worse, very often bring legal action against the doctor for unintentional mistakes. One of the agents in talking over the matter with me, said that he would get out the next card blanks for his company, and he would fix the doctor so that he would have to be very careful in filling them out or he would have to answer in the court for his conduct! This is the recompense the doctor receives. This agent said just what the others thought, as I notice they all have a similar card to the one he put out.

I have only touched on some, not all, of the most important points, and I should like for other physicians to say more. Why cannot this be brought up in the medical associations, both county, state and interstate, and let the doctors agree among themselves to give a certificate of sickness on prescription blanks, and then let the mutual associations employ a physician to look after their claims as the life and accident insurance companies do? This would be fair to all concerned. But instead they buy an abridged medical dictionary and try to look up diseases and argue with the physician on his diagnosis. They are rich enough to employ a physician and pay for their protection.

These cards are a nuisance and an imposition on the doctors. Let others discuss this question. A Subscriber.

AN ADAPTATION OF THE ALKALOIDAL IDEA.

So far as he dares—and a good deal further than he tells—the intelligent manufacturer has adopted the alkaloids. He makes his elixirs of cinchona from the cinchonic alkaloids and colors them to imitate your beloved dirty galenics; his wines of nux contain the true active principle of nux, in definite quantity, and none of your uncertainties, decompositions and nauseants. He even tried to make you belladonna plasters with a definite quantity of atropine in them, but one of your big lookers-backward got up and howled him down. The Pharmacopeia called for *belladonna* and belladonna we must have, though we know very well that the man was right and his product in every way better suited for intelligent application.—Editorial, American Journal of Clinical Medicine.

Miscellaneous Notes.

Maud Andrews, a chorus girl, stopping at Beiser's Hotel, opposite the Empire Theater, got some headache powders with instructions to take one every four hours, last night. Instead of following the directions, the girl took one every half hour, and she finally became unconscious Dr. Poole of the Dispensary staff, revived her.

It is apparent from this report that Miss Andrews took her medicine *eight times* as often as she was instructed to do. Let every physican who is willing to take the consequences upon himself, when his patient takes eight doses of his medicine, during the time he should take one dose, now hold up his hand, or "forever after hold his peace."

A teaspoonful of salt is recommended by some as a fine tonic with which to begin the day. Let Samuel Hopkins Adams take eight teaspoonfuls, and then he may write an article on the "subtle poison" contained in common table salt.

Oskaloosa, Ia., Nov. 21.—Special: Major Smith dropped dead at the Cricket mines today from the effects of taking many headache tablets.

Well, Major (?) Smith was a poor old "nigger," working in the Cricket Mines 15 miles from Oskaloosa. He was subject to epileptic fits, in one of which he died. A coroner's jury investigated the case and found absolutely no evidence of poisoning from headache powders or other drug, and brought in a verdict that "Major Smith came to his death by internal hemorrhage from the left iliac artery." The rumor that he died from poison was circulated by first comers who found Smith "frothing at the mouth," as epileptics do, and concluded he was poisoned.

VERATRUM OR VERATRINE?

Our own studies have been upon veratrine for a long time, and it is with some difficulty that we turn back to compare it with veratrum. Both depress the heart and respiration, relax vascular tension and stim-

ulate the eliminant apparatus throughout. Both irritate the stomach and bowels while given in doses as yet too small to dangerously depress any of the vital functions, and thus carry with them the double assurance of safety, in elimination and warning of approaching peril. Both have been proved effective clinically in the same wide field. The differences are to be found in the decided stimulation of the cardiac and other muscular fibers induced by veratrine, the brief increase of vascular tension it causes when given in small doses, and its less powerfully depressant action on the respiration. When an active principle shall have been extracted that affords these veratrum characteristics, it may be utilized in such cases as demand just such therapeutic applications, but since veratrum is uncertain as to its effects, and liable to change from internal decay and evaporation, we can not now make of it such nice applications.

EFFECT OF BALLOONING ON THE VISION.

Some valuable experiments have been carried out by Dr. Robert Daulnoy, the well-known Parisian eye specialist, concerning the effects of ballooning at varying altitudes upon the human visual system. The first investigation was carried out at an altitude of 6,000 feet. A bottle was flung overboard into a lake beneath. The occupants of the car were able to follow with ease the descent of the bottle through the air, and also able to watch the neck of the vessel as it disappeared into the water. The balloon then soared to a greater height, and by examination the doctor ascertained that at this altitude there was a considerable diminution of the pressure on the visual organs. The pupils distended, and the sensibility of the optic nerve was appreciably increased. As a result of his observation Dr. Daulnoy is of opinion that certain diseases of the eye, if treated at a high altitude in rarefied atmosphere, would be more beneficial and atended with greater success than is now the case. Especially would this be so in treating the maladies glaucoma and chroniditis, or the releasing and loosening of the retina, which are two common eye complaints. Owing to the increased

sensitiveness of the optic nerve in the purer rarefied air, the action of the liniment or lotion which is dropped into the affected eye under such conditions would be attended, it is maintained, with astonishing results.—Scientific American.

THE NEW PHARMACOPOEIA.

The eighth decennial revision of the United States Pharmacopoeia, which was due in 1900, became official on September 1, 1905. A number of articles considered obsolete have been dismissed, and nearly an equal number of new substances have been added. An effort has been made to bring tinctures to a uniform 10 per cent. strength, while drugs containing alkaloids must be assayed and brought to a standard before being dispensed. Among the important additions are cocaine and Coca Wine, the recognition of the latter endorsing a flattering tribute to M. Mariani, who was the originator of this preparation, which has only now been made official. Coca leaves, according to the U. S. P., must contain 0.5 per cent. of ether soluble alkaloids, by weight, and Fluid extract of Coca must contain 0.5 grammes of ether soluble alkaloids, by weight, in each 100 cubic centimeters. That means other alkaloids contained in Coca which are not soluble in ether. Surely great bodies do move slowly. Cocaine was discovered nearly fifty years ago, and it is an equal number of years ago that M. Mariani first introduced Coca Wine to the medical profession.

Notwithstanding the fact that "Vinum Cocae" is now official, physicians who desire the original preparation must carefully specify "Mariani" in order to obtain the results which have for years been advocated as due to Coca—made available in Vin Mariani.—*The Coca Leaf,* September, 1905.

SURGICAL HINTS.

A film of collodion is an excellent protective material for granulating wounds. It can be made in the manner recommended by Stuart McGuire, by pouring collodion on an aseptic glass plate, and after it has hardened carefully cutting it into strips.

In cases of greenstick fractures of the forearm it is generally advisable to complete the fracture; otherwise there is apt to be considerable deformity owing to the formation of a mass of callus on one side at the seat of fracture, destroying the symmetry of the limb.

In lacerated wounds of the hand free drainage is of paramount importance. Tissues irredeemably destroyed should be snipped away with scissors, as more can thus be saved than with the knife. In suturing the rule is, few stitches and no tension. Amputation must always be the last resort.

In a syphilitic, as in a tuberculous, individual joint affections may follow a sprain, and the two conditions may resemble each other so closely that a diagnosis is very difficult. In cases of doubtful tuberculous arthritis, especially in adults, it is well to examine for evidences of syphilis and to try the effcets of specific medication.

In Potts' fracture it is very essential for a good result to reduce the outward and downward displacement of the foot. This can ordinarily be done by simple manipulation without resort to an anesthetic, the tendo Achillis being relaxed by complete flexion of the knee and thigh. To prevent a stiff joint early massage and gentle passive motion should be practiced.

Neurasthenic persons are apt to imagine that they suffer from all sorts of diseases. If such a patient once gets the idea of having appendicitis he is very likely to develop hypersensitiveness and painful areas over the abdomen, as over McBurney's point. Given such a combination of extreme tenderness over this area with constipation and abdominal distention due to intestinal gases, and it is sometimes difficult to diagnose the case from chronic appendicitis.

HEMORRHOIDS.

By Elmore Palmer, M. D., Buffalo, N. Y., Ex-President of the Western New York Medical Society.

Without any comment on the nature, causes, varieties, or pathological conditions found existing in rectal ailments, I will transcribe from my records some cases of hemorrhoidal troubles that I have treated within the last two years with Glyco-Thymoline.

Piles.

Case 1.—Mr. B. O. H., age 29; had been ailing several years with what he called Piles. A careful examination revealed the following condition: On the margin of the anus were three strangulated tumors about the size and color of a Concord grape. On continued pressure the tumors would empty themselves almost entirely but refill again in the course of an hour. Several similar tumors about the size of a pea were found just inside the sphincter. Anal moisture and pruritus were very troublesome, but singularly enough little pain was complained of. The bowels were somewhat constipated. Regulated the diet and secretions, gave an enema of two ounces of a fifty per cent. solution of Glyco-Thymoline every night and morning quite warm, held in until absorbed, and applied same to anus on lamb's wool during the night and as much of the daytime as he could spare from his office. A decided improvement was noted in a week, and three weeks later he was cured. That was nearly two years ago and there has been no trouble since.

Bleeding Piles.

Case 2.—Mrs. R., consulted me regarding "bleeding piles," which had been gradually growing worse for three or four years. At every stool she would bleed two or three tablespoonfuls. She had become quite anemic. No external tumors. A corroding ulcer as large as a nickel was diagnosed just inside of the internal sphincter. Washed out the rectum three times a day at first with a warm solution of boric acid and then gave an enema of one ounce of Glyco-Thymoline full strength hot, held in until absorbed. A wonderful relief was noted from the first treatment. After four days only two enemas a day were used as no blood was passed. At the end of two weeks time a careful examination of the rectum showed it to be perfectly normal. She was cured. No return after eight months.

THE NECESSITY OF IRON TO THE PREGNANT WOMAN.

It is universally conceded that the administration of iron in pregnancy is now made expedient by the development of an anemia which is usually foreign to non-pregnant subjects, and which, at one time, was an uncommon occurrence even in the case of the child-bearing.

During pregnancy, the appetite is invariably immoderately capricious and there is a disposition to gratify the palate by partaking of those foodstuffs which have been rendered fictitiously attractive to the partial, or by the complete, exclusion of the more simple and nutritious viands. While such indulgencies must inevitably contribute to the development of anemia, it was not until the modern table supply, consisting almost wholly of such victuals as hot breads, highly spiced refrigerated meats, artificially colored canned goods and pastries, was made the rule with the masses as well as the classes, that anemia of pregnancy became the rule and not the exception.

In addition to the inadequate food supply which is now current, the anemia of pregnancy is rendered more widespread by the style of dress imposed by society upon women in all the walks of life. Furthermore, the blood depletion of prospective mothers of the present day is materially increased through their abandonment of outdoor exercise on account of a false sense of modesty.

In view of the fact that the health of a woman in the pregnant state, and the proper development of her unborn, is always dependent on a blood stream that is qualitatively and quantitatively sufficient for the exigencies of pregnancy, the administration of iron is made distinctly needful by the artificialities inseparably associated with modern life.

In selecting the form of iron to be administered to pregnant women, the utmost discrimination should be exercised. That form of the drug which is most easily assimilated and proves most acceptable to the palate is the one which should be employed. This injunction is made for the reason that the nausea which is incident to the pregnant state must not be increased, and for the further reason that constipation must not be induced by the drug. Again, the nutritive processes must be held at the proper standard, and this cannot be done in the absence of a painstaking selection of the iron to be administered.

Pepto-Mangan (Gude) is the ideal form of iron for these cases. This contention has the support or logic. The hemoglobin-imparting properties and the nutritive potency of the preparation are confessedly greater than those of any other form of iron. Then, too, Pepto-Mangan

(Gude) is more readily absorbed and more completely assimilated than any other preparation of iron. Still further, Pepto-Mangan (Gude) produces no untoward effect upon the mucous surfaces of the alimentary tract, nor does it encourage constipation or increase nausea.

In addition to overcoming the anemia and the deficiencies of nutrition, Pepto-Mangan (Gude) adds tone to the blood vessels and reduces to a minimum the softening of the heart walls which always attends the pregnant state.

Certainly one of the most gratifying effects of Pepto-Mangan (Gude) is the increase of physical strength and buoyance of spirits which the prospective mother derives from its administration. That the unborn participate in the benefits derivable from Pepto-Mangan (Gude), there can be no doubt, for at birth they present unmistakable evidences of physical robustness and seem well fortified against those illnesses which are peculiar to infanthood. It is also a matter of common observation that the roborant action of Pepto-Mangan (Gude) enables the mother better to bear the strain of parturition.

EXAMINATION OF SURGEONS.

Bureau of Public Health and Marine Hospital Service,
Washington, D. C., July 2, 1906.

A board of officers will be convened to meet at the Bureau of Public Health and Marine Hospital Service, 3 B Street, S. E., Washington, D. C., Monday, August 5, 1906, at 10 o'clock a. m., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health and Marine Hospital Service.

Candidates must be between twenty-two and thirty years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to their professional and moral character.

The following is the usual order of the examination: 1, Physical. 2, Oral. 3, Written. 4, Clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination on the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary examination, history, literature, and natural sciences.

The clinical examination is conducted at a hospital, and when prac-

ticable, candidates are required to perform surgical operations on a cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur.

Upon appointment the young officers are, as a rule, first assigned to duty at one of the large hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco.

After five years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Promotion to the grade of surgeon is made according to seniority, and after the examination as vacancies occur in that grade.

Assistant surgeons receive sixteen hundred dollars, passed assistant surgeons, two thousand dollars, and surgeons, twenty-five hundred dollars a year. When quarters are not provided commutation at the rate of thirty, forty, and fifty dollars a month, according to grade, is allowed.

All grades above that of assistant surgeon receive longevity pay, ten per centum in addition to the regular salary for every five years' service up to forty per centum after twenty years' service.

The tenure of office is permanent. Officers travelling under orders are allowed actual expenses.

For further information, or for invitation to appear before the board of examiners, address.

THE SURGEON GENERAL,
Public Health and Marine Hospital Service, Washington, D. C.

"THE CHUNNENUGGEE" DR. SEALE HARRIS' PRIVATE SANATORIUM

FOR THE

TREATMENT OF DISEASES OF THE STOMACH, INTESTINES AND NERVOUS SYSTEM

Isolated apartments for the treatment of ALCOHOL, MORPHINE, and other DRUG ADDICTIONS. We are especially prepared for the DIAGNOSIS OF TUBERCULOSIS. Insane patients and epileptics are not received. Sanatorium is fully equipped with modern appliances for the treatment of the above mentioned diseases—X-ray and static machine, faradic, galvanic and high frequency electrical outfits, vibratory massage, etc. For rates and other information, address

DR. SEALE HARRIS, Physician in Charge,
or DR. J. L. BOWMAN, Resident Physician,
Union Springs, Ala.